1

With Averaging

EnerMet Plant	Unit		Nameplate or HI capacity (mmBtu/hr)	Q^-.174	PM Limit E (lb/mmBtu)	**Actual PM Em.**	Averaging
	6	Coal	1668			0.1607	
	7	Coal	1668			0.2043	
	8	Coal	1640			0.1544	
	Sm.	Natural Gas	300			0.0800	
			5276	0.2251	0.2026		0.1679

2

Without Averaging

EnerMet Plant	Unit		Nameplate or HI capacity (mmBtu/hr)	Q^-.174	PM Limit E (lb/mmBtu)
	6	Coal	1668		
	7	Coal	1668		
	8	Coal	1640		
	Sm.	Natural Gas	300		
			5276	0.2251	0.2026

Previously Proposed Consolidated Rule Summary Table

	Existing: total heat input of existing units only			"Q" obtained through Summation of all units or on a unit by unit basis	New: total heat input of new units			Averaging Allowed	≥30% altered considered new?	Existing unit Date (on or before)
Range in mmBtu/hr	<10	≥10, ≤5,000	>5,000		<10	≥10, ≤1,000	>1,000			
Kansas City & St. Louis limits	0.6	$1.09Q^{-0.259}$	0.12	**Unclear - Summation / unit by unit?**	0.04	$0.80Q^{-0.301}$	0.1	**No**	Yes	February 15, 1979
	Existing: total heat input of existing units only			"Q" obtained through Summation of all units or on a unit by unit basis	New: total heat input of new units			Averaging Allowed	≥30% altered considered new?	Existing unit Date (on or before)
Range in mmBtu/hr	≤10	>10, <10,000	≥10,000		≤10	>10, <2,000	≥2,000			
Outstate & Springfield- Greene limits	0.6	$0.90Q^{-0.174}$	0.18	Unclear - Summation / unit by unit?	0.06	$1.31Q^{-0.338}$	0.1	No	No	September & February 24, 1971

Current Area Specific Rules Summary Table

	Existing: total heat input of existing units only			"Q" obtained through Summation of all units or on a unit by unit basis	New: total heat input of new units			Averaging Allowed	≥30% altered considered new?	Existing unit Date (on or before)
Range in mmBtu/hr	<10	≥10, ≤5,000	>5,000		<10	≥10, ≤1,000	>1,000			
Kansas City & St. Louis limits	0.6	$1.09Q^{-0.259}$	0.12	**Summation**	0.04	$0.80Q^{-0.301}$	0.1	**Yes**	Yes	February 15, 1979
	Existing: total heat input of existing units only			"Q" obtained through Summation of all units or on a unit by unit basis	New: total heat input of new units			Averaging Allowed	≥30% altered considered new?	Existing unit Date (on or before)
Range in mmBtu/hr	≤10	>10, <10,000	≥10,000		≤10	>10, <2,000	≥2,000			
Outstate & Springfield- Greene limits	0.6	$0.90Q^{-0.174}$	0.18	Unclear - Summation / unit by unit?	0.06	$1.31Q^{-0.338}$	0.1	No	No	September & February 24, 1971

* Shading represents areas of the rule(s) where significant changes were made from the Current Area specific rules to the Previously Proposed Consolidation

JUN 2 2011

Ms. Wendy Vit
Chief
Operations Section
Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0716

Dear Ms. Vit:

We appreciate the opportunity to provide written comments on the following rules: 10 CSR 10.6.405 (new rule) Restriction of Particulate Matter Emissions From Fuel Burning equipment Used For Indirect Heating. The U.S. Environmental Protection Agency, Region 7 (EPA R7) is providing comments pursuant to the public notice for these rules.

10 CSR 10-6.405 (new rule) Restrictions of Particulate Emissions from fuel burning Equipment used for Indirect Heating

The MDNR proposes to consolidate the four existing area-specific indirect heating rules into a single state-wide rule and include an averaging option as an alternate method of compliance for sources in the outstate and Springfield-Greene County areas. Exemptions are also being added for individual emission units using clean-burning fuels and for entire facilities using only these specific clean fuels. The four existing area-specific indirect heating rules are being proposed for recsission because they will be replaced with the new indirect heating rule, 10 CSR 10-6.405, that consolidates the area specific rule requirements into one state-wide rule. The EPA has 5 comments related to this rule.

1. In 10 CSR 10-6.405(1)(B), the phrase "unless more strict standards apply" is not clear. If the language is intended to somehow limit the use of tire derived fuel, then Missouri should more carefully describe what it intends by the language.

2. Many companies are now making plans to convert their fuel burning equipment to fire biomass in lieu of current solid fuels. The PM rules set limits for wood, but biomass, like switchgrass and corn stover don't necessarily fit this category. As a consequence, it remains uncertain whether any PM limits apply to biomass operations or not. MDNR should clarify accordingly. If the MDNR intends to cover such operations, the rule should specify that it applies to this category.

3. 10 CSR 10-6.405(1)(C), specifies that the heat input from devices described in the rule must be used in the "calculation of Q" in paragraphs (D) and (E). To ensure that there is no confusion about what is meant by the "calculation of Q", since paragraphs (D) and (E) don't specify any formulae for deriving Q, we recommend separation of paragraph (C) and simply clarify in paragraphs (D) and (E) that the heat input from all fuel burning equipment at the plant, including NSPS and other clean units, must be summed to determine Q.

AWMD/APDB/AtPS:LK:LLT:6/2/11:H:Air:APDB;Correspondence2011:MACCCommends_6.045 5-26-11doc

APDB	CNSL	APDB
Kemp	Patrick	Tapp
06/02/11	6-2-11	6/2

4. As part of Missouri's broader efforts to consolidate and clarify the PM rules, the rule should clearly state which form(s) of PM are included in the fuel burning limits in 10 CSR 10-6.405. Historically, these limits have focused only coarse, filterable PM, as measured by Reference Method 5. The rules should make clear whether the fuel burning limits include condensable emissions or not.

5. 10 CSR 10-6.405 now includes a Test Methods section in paragraph (5). We recommend the following changes:

   a) Paragraphs (5)(B) and (5)(G) appear to be partially duplicative. We recommend the generic reference to "stack tests" be supplemented with the first sentence in paragraph (G), to read "Stack tests, as specified in 10 CSR 10-6.030(5)". More specifically, if Missouri determines that the limits in 10 CSR 10-6.405 apply only to coarse, filterable PM, then we recommend that Paragraph (B) point explicitly to 10 CSR 10-6.030(5)(A) or (B). If Missouri determines that the PM limits also include condensable emissions then Paragraph (B) should include an additional reference to Reference Method 202, found in 10 CSR 10-6.030(5)(E). The second sentence in paragraph (G) should remain.

   b) We recommend that the AP-42 and FIRE databases should probably be removed, or as a minimum significantly demoted, from the hierarchy of PM compliance techniques. As EPA describes in the Introduction to AP-42 ,

   "Emission factors in AP-42 are neither the EPA-recommended emission limits (e. g., best available control technology or BACT, or lowest achievable emission rate or LAER) nor standards (e. g., National Emission Standard for Hazardous Air Pollutants or NESHAP, or New Source Performance Standards or NSPS). Use of these factors as source-specific permit limits and/or as emission regulation compliance determinations is not recommended by the EPA. Because emission factors essentially represent an average of a range of emission rates, approximately half of the subject sources will have emission rates greater than the emission factor and the other half will have emission rates less than the factor. As such, a permit limit using an AP-42 emission factor would result in half of the sources being in noncompliance."

   As a consequence, AP-42 and other emission factors are should be avoided unless they are highly rated or adjusted upward to account for the significant gap in quality.

If you or your staff have any questions or would like to discuss these comments, please contact Lachala Kemp of my staff at kemp.lachala or (913) 551-7214.

Sincerely,

Joshua A. Tapp
Branch Chief
Air Planning and Development Branch

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

JUN 2 2011

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Branch Chief
Air Planning and Development Branch

1st draft

Missouri
Department of
Natural Resources

10 CSR 10-6.405 Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating

(1) Applicability.

(A) This rule applies throughout the state with additional conditions applicable to the metropolitan areas of Kansas City, Springfield and St. Louis as found in sections (2), and (3) of this rule.

(B) This rule applies to installations in which fuel is burned for the primary purpose of producing steam, hot water or hot air or other indirect heating of liquids, gases or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels may include for example coal, coke, lignite, coke breeze, gas, fuel oil and wood but do not include refuse. When any products or byproducts of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

(C) An installation's compliance with 10 CSR 10-6.070 would be deemed compliance with 10 CSR 10-6.405, however the heat input from such installation must be included in the calculation of Q, the installation's total heat input as defined in subsection (3)(D) and (3)(E) of this rule.

(2) Definitions.

(A) Existing—Any source which was in being, installed or under construction on the date provided in the following table:

Area of State	Contruction date began on or before
Kansas City Metropolitan Area	February 15, 1979*
St. Louis Metropolitan Area	February 15, 1979*
Springfield-Greene County Area	September 24, 1971
Outstate Area	February 24, 1971

*Exception: If any source subsequently is altered, repaired or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing, but shall be considered as new.

(B) New—Any source which is not an existing source, as defined in subsection (2)(A) of this rule.

(C) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040(2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040(3).

(B) For purposes of this rule, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack(s). The hourly heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater, except in the case of boilers of ten (10) million British thermal units (mmBtu) or less the heat input can also be determined by the higher heating value (HHV) of the fuel used at maximum operating conditions. The total heat input of all fuel burning units used for indirect heating at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

(C) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission limitations than in this rule shall meet the requirements of the permits issued under 10 CSR 10-6.060 Construction Permits Required.

(D) Emission Limitations for Existing Indirect Heating Sources. No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following table:

Area of State	Heat Input (mmBtu/hour)	Limits for Existing Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	<10	0.60
	>5,000	0.12
	≥10, and ≤5,000	$E=1.09Q^{-0.259}$
Springfield-Greene County and Outstate Missouri	≤10	0.60
	≥10,000	0.18
	>10, and <10,000	$E=0.90Q^{-0.174}$

where
E = the maximum allowable particulate emission rate in pounds per mmBtu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in mmBtu per hour.

(E) Emission Limitations for New Indirect Heating Sources. No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following table:

Area of State	Heat Input (mmBtu/hour)	Limits for New Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	<10	0.40
	>1,000	0.10
	≥10, and ≤1,000	$E=0.80Q^{-0.301}$

Springfield-Greene County and Outstate Missouri	≤10	0.60
	≥2,000	0.10
	>10, and <2,000	$E=1.31Q^{-0.338}$

where
E = the maximum allowable particulate emission rate in pounds per mmBtu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in mmBtu per hour.

(F) Alternate Method of Compliance.

1. Compliance with this rule also may be demonstrated if the weighted average emission rate (ER) of two (2) or more indirect heating sources is less than or equal to the maximum allowable particulate ER determined in subsection (3)(D) or (3)(E) of this rule. The weighted average ER for the indirect heating sources to be averaged shall be calculated by the following formula:

$$WAER = \frac{\sum_{i=1}^{n} (Er_i \times Q_i)}{\sum_{i=1}^{n} Q_i}$$

where
WAER = the weighted average ER in pounds per mmBtu;
ER_i = the actual ER of the ith indirect heating source in pounds per mmBtu;
Q_i = the rated heat input of the ith indirect heating source in mmBtu per hour; and
n = the number of indirect heating sources in the average.

2. Installations demonstrating compliance with this rule in accordance with the requirements of subsection (3)(F) of this rule shall do so by making written application to the director. The application shall include the calculations performed in paragraph (3)(F)1. of this rule and all necessary information relative to making this demonstration.

3. Subsection (3)(F) of this rule only shall apply--

A. To indirect heating sources while burning coal; and

B. If the maximum allowable particulate ER determined in paragraph (3)(F)2. of this rule for each indirect heating source does not exceed the maximum allowable particulate ER determined for that source from subsection (3)(D) or (3)(E) of this rule using the rated heat input, Q_i, for the individual indirect heating source as if that individual indirect heating source was the only such source at the installation.

(4) Reporting and Recordkeeping. All records must be kept on-site for a period of five (5) years and made available to the department upon request. The owner or operator shall maintain records of the following information for each year the unit is operated.

(A) The identification of each affected unit and the name and address of the plant where the unit is located for each unit subject to this rule;

(B) The calendar date of the record;

(C) The emission rate in pounds per mmBtu for each unit on an annual basis for those units complying with the limit in subsection (3)(D) and (3)(E) of this rule.

(D) The emission rate in pounds per mmBtu for each facility on an annual basis for those units complying with subsection (3)(F) of this rule.

(5) Test Methods. The following hierarchy of methods shall be used to determine compliance with subsections (3)(D) and (3)(E) of this rule.

(A) Continuous Emission Monitoring System (CEMS), or Compliance Assurance Monitoring (CAM) Plan;

(B) Stack tests;

(C) AP-42 (Environmental Protection Agency (EPA) *Compilation of Air Pollution Emission Factors*) or FIRE (Factor Information and Retrieval System);

(D) Other EPA documents;

(E) Sound engineering calculations; or

(F) The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5). Any other method approved for the source incorporated into an operating permit.

2nd Draft Revd 9/2010

10 CSR 10-6.405 Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating

(1) Applicability.

(A) This rule applies throughout the state with additional conditions applicable to the metropolitan areas of Kansas City, Springfield and St. Louis as found in sections (2), and (3) of this rule.

(B) This rule applies to installations in which fuel is burned for the primary purpose of producing steam, hot water or hot air or other indirect heating of liquids, gases or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels may include for example coal, coke, lignite, coke breeze, gas, fuel oil and wood but do not include refuse. When any products or byproducts of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

(C) This rule shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070 except as calculated in subsection (3)(C) of this rule.

(2) Definitions.

(A) Existing—Any source which was in being, installed or under construction on the date provided in the following table:

Area of State	Contruction date began on or before
Kansas City Metropolitan Area	February 15, 1979*
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*Exception: If any source subsequently is altered, repaired or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing, but shall be considered as new.

(B) New—Any source which is not an existing source, as defined in subsection (2)(A) of this rule.

(C) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040(2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040(3).

(B) For purposes of this rule, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack(s). The hourly heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater, except in the case of boilers of ten (10) million British thermal units (mmBtu) or less the heat input can also be determined by the higher heating value (HHV) of the fuel used at maximum operating conditions. The total heat input of all fuel burning units used for indirect heating at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

(C) Indirect heat input values from sources that are subject to 10 CSR 10-6.070 New Source Performance Standards shall be used in the calculation of Q (the installation's total heat input).

(D) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission limitations than in this rule shall meet the requirements **of the permis issued under** 10 CSR 10-6.060 Construction Permits Required.

(E) Emission Limitations for Existing Indirect Heating Sources. No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following table:

Area of State	Heat Input (mmBtu/hour)	Limits for Existing Sources (pounds/mmBtu)
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	≥10, and ≤5,000	$E=1.09Q^{-0.259}$
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	≥10,000	0.18
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where
E = the maximum allowable particulate emission rate in pounds per mmBtu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in mmBtu per hour.

(F) Emission Limitations for New Indirect Heating Sources. No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following table:

Area of State	Heat Input (mmBtu/hour)	Limits for New Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	<10	0.40
	>1,000	0.10
	≥10, and ≤1,000	$E=0.80Q^{-0.301}$

Springfield-Greene County and Outstate Missouri	≤10	0.60
	≥2,000	0.10
	>10, and <2,000	$E=1.31Q^{-0.338}$

where
E = the maximum allowable particulate emission rate in pounds per mmBtu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in mmBtu per hour.

(G) Alternate Method of Compliance.

1. Compliance with this rule also may be demonstrated if the weighted average emission rate (ER) of two (2) or more indirect heating sources is less than or equal to the maximum allowable particulate ER determined in subsection (3)(E) or (3)(F) of this rule. The weighted average ER for the indirect heating sources to be averaged shall be calculated by the following formula:

$$WAER = \frac{\sum_{i=1}^{n} (Er_i \times Q_i)}{\sum_{i=1}^{n} Q_i}$$

where
WAER = the weighted average ER in pounds per mmBtu;
ER_i = the actual ER of the ith indirect heating source in pounds per mmBtu;
Q_i = the rated heat input of the ith indirect heating source in mmBtu per hour; and
n = the number of indirect heating sources in the average.

2. Installations demonstrating compliance with this rule in accordance with the requirements of subsection (3)(G) of this rule shall do so by making written application to the director. The application shall include the calculations performed in paragraph (3)(G)1. of this rule and all necessary information relative to making this demonstration. After written approval by the director, the ER used in the calculations of paragraph (3)(G)1. of this rule shall become the maximum allowable particulate ER for each specified indirect heating source under this rule.

3. Subsection (3)(G) of this rule only shall apply--

A. To indirect heating sources while burning coal; and

B. If the maximum allowable particulate ER determined in paragraph (3)(G)2. of this rule for each indirect heating source does not exceed the maximum allowable particulate ER determined for that source from subsection (3)(E) or (3)(F) of this rule using the rated heat input, Q_i, for the individual indirect heating source as if that individual indirect heating source was the only such source at the installation.

(4) Reporting and Recordkeeping. **All records must be kept on-site for a period of five (5) years and made available to the department upon request. The owner or operator shall maintain records of the following information for each year the unit is operated.**

(A) The identification of each affected unit and the name and address of the plant where the unit is located for each unit subject to this rule;

(B) The calendar date of the record;

(C) The emission rate in lbs per mmBtu for each unit on an annual basis for those units complying with the limit in subsection (3)(E) and (F) of this rule.

(D) The emission rate in lbs per mmBtu for each facility on an annual basis for those units complying with subsection (3)(G) of this rule.

(5) Test Methods. **The following hierarchy of methods shall be used to determine compliance with subsections (E) and (F) of this rule.**

(A) Continuous Emission Monitoring System (CEMS), or Compliance Assurance Monitoring (CAM) Plan;

(B) Stack tests;

(C) AP-42 (Environmental Protection Agency (EPA) *Compilation of Air Pollution Emission Factors*) or FIRE (Factor Information and Retrieval System);

(D) Other EPA documents;

(E) Sound engineering calculations; or

(F) **The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5). Any other method which is in accordance with good professional practice may be used with the consent of the staff director and EPA.**

send draft to MO before finalize

Set up call w/ MDNR Court ordered deadline withdrawls

Lachala,

Here are a few observations on Missouri's fuel burning equipment PM rule consolidation.

comment from utility

1) In 10 CSR 10-6.405(1)(B), the phrase "unless more strict standards apply" following tire derived fuel doesn't make any sense. It isn't clear whether this was a cut and paste error or whether the language is intended to somehow limit the use of TDF. If the former then MDNR should remove the stray language. If the latter then Missouri should more carefully describe what it intends by the language.

SIP MACT (under consideration)

Should this be done in other rules & statement not needed to be understood

2) Many companies are now making plans to convert their fuel burning equipment to fire biomass in lieu of current solid fuels. The PM rules set limits for wood, but biomass, like switchgrass and corn stover don't necessarily fit this category. As a consequence, it remains uncertain if any PM limits apply to biomass operations or not. MDNR should clarify accordingly.

3) In 10 CSR 10-6.405(1)(C), Missouri deems equipment subject to the NSPS units and other equipment burning "clean" sulfur fuels to have met the SIP PM limits. This is probably okay. However, the paragraph goes on to specify that the heat input from these devices must be used in the "calculation of Q" in paragraphs (D) and (E). To ensure that there is no confusion about what is meant by the "calculation of Q", since paragraphs (D) and (E) don't specify any formulae for deriving Q, it may be cleaner to separate this requirement from paragraph (C) and simply clarify in paragraphs (D) and (E) that the heat input from all fuel burning equipment at the plant, including NSPS and other clean units, must be summed to determine Q. Any specific language..... to add (Natasha)

4) As part of Missouri's broader efforts to consolidate and clean up PM rules, it would be helpful to clearly state which form(s) of PM are included in the fuel burning limits in 10 CSR 10-6.405. Historically, these limits have focused only coarse, filterable PM, as measured by Reference Method 5, but changes to the definition of PM in 2006 leave open the possibility that condensables should also be included. Depending on how Missouri resolves this discrepancy, the rules should make clear whether the fuel burning limits include condensable emissions or not.

asking them if they should or the must

5) 10 CSR 10-6.405 now includes a Test Methods section in paragraph (5). This is an improvement over the area rules now being consolidated, but we recommend the following improvements:

a) Paragraphs (5)(B) and (5)(G) appear to be partially duplicative. We recommend the generic reference to "stack tests" be supplemented with the first sentence in paragraph (G), to read "Stack tests, as specified in 10 CSR 10-6.030(5)". More specifically, if Missouri determines that the limits in 10 CSR 10-6.405 apply only to coarse, filterable PM, then we recommend that Paragraph (B) point explicitly to 10 CSR 10-6.030(5)(A) or (B). If Missouri determines that the PM limits also include condensable emissions then Paragraph (B) should include an additional reference to Reference Method 202, found in 10 CSR 10-6.030(5)(E). The second sentence in paragraph (G) should remain.

b) The AP-42 and FIRE databases should probably be removed, or as a minimum significantly demoted, from the hierarchy of PM compliance techniques. As EPA describes in the Introduction to AP-42 ,

> *"Emission factors in AP-42 are neither EPA-recommended emission limits (e. g., best available control technology or BACT, or lowest achievable emission rate or LAER) nor standards (e. g., National Emission Standard for Hazardous Air Pollutants or NESHAP, or New Source Performance Standards or NSPS). Use of these factors as source-specific permit limits and/or as emission regulation compliance determinations is not recommended by EPA. Because emission factors essentially represent an average of a range of emission rates, approximately half of the subject sources will have emission rates greater than the emission factor and the other half will have emission rates less than the factor. As such, a permit limit using an AP-42 emission factor would result in half of the sources being in noncompliance. "*

As a consequence, AP-42 and other emission factors are probably best avoided unless they are highly rated or adjusted upward to account for the significant gap in quality.

****

NO - 10-~~4.040~~ 6.405 Indirect Heating

5/18/11
lk-comments

Rule in CSR

- 1(b) adds - tire derived fuels unless more strict standards apply
- 1(c) → are we ok w/ the language change?
- 3(c) → Ok w/ language??
- Calculations?? Alex
- Added more to sections 4 & 5 - I believe we're Ok w/ that?
- (5) Test Methods - removed CAM Plan in final rule - added to E

AC, JM, BP, ESteven

5/04/11

- What about biomass (do they apply) (switchgrass/non-woody biomass) - Biomass boilers - what limits would apply?
- ?? More strict standards apply??
- Does the 1.2% exemption apply to all or just #2 & #6
- 1(C) ID Section C - added language - section D - is new section (from 1-Applicability)
- Section 5: very clear about what form of PM where talking about (condensibles, filterable) needs to reference specific methods

KC Metro Area

10 CSR 10-2.040 Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

(1) General Provisions

(A) This rule applies to installations which have indirect heating sources.

(B) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040, section (2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040, section (3).

(C) The heat input used for each indirect heating source shall be the equipment manufacturer's or designer's guaranteed maximum input in millions of BTU's per hour, whichever is greater.

(D) The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030, section (5).

(E) For the purpose of this rule, only, the following terms shall have the meaning ascribed below:

1. Existing--means any source which was in being, installed, or under construction on February 15, 1979, except that if any source is subsequently altered, repaired, or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing, but shall be considered as new.

2. New--means any source which is not an existing source, as defined in paragraph (1)(E) 1.

(F) This regulation shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070.

(G) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission limitations than in this rule, shall meet the requirements of 10 CSR 10-6.060, Permits Required.

(2) Maximum Allowable Particulate Emission Rate from Existing Indirect Heating Sources

(A) The total heat input of all existing indirect heating sources within an installation shall be used to determine the maximum allowable particulate emission rate, which is to be

applied to each existing indirect heating source within the installation. Thereafter, each indirect heating source within the installation shall be tested and considered independently for compliance with this rule.

(B) Emission Limitations

1. The maximum allowable particulate emissions rate for an installation of existing indirect heating sources with a heat input rate of less than ten (10) million BTU per hour shall be 0.60 pounds per million BTU of heat input.

2. The maximum allowable particulate emission rate for an installation of existing indirect heating sources with a heat input rate equal to or greater than ten (10) million BTU per hour and less than or equal to five thousand (5,000) million BTU per hour shall be determined by the following equation:

$$E = 1.09(Q)^{-0.259}$$

where

E = the maximum allowable particulate emission rate in pounds per million BTU of heat input rounded off to two (2) decimal places, and

Q = the installation heat input in millions of BTU per hour.

3. The maximum allowable particulate emission rate for an installation of existing indirect heating sources with a heat input rate greater than five thousand (5,000) million BTU per hour shall be 0.12 pounds per million BTU of heat input.

(3) Maximum Allowable Particulate Emission Rate from New Indirect Heating Sources

(A) The total heat input of all new and existing indirect heating sources within an installation shall be used to determine the maximum allowable particulate emission rate which is to be applied to each new indirect heating source within the installation. The maximum allowable particulate emission rate from the existing indirect heating sources within such an installation shall be determined as specified by 10 CSR 10-2.040, section (2). Thereafter, each indirect heating source within the installation shall be tested and considered independently for compliance with this rule.

(B) Emission Limitations

1. The maximum allowable particulate emission rate for new sources in an installation of indirect heating sources with a heat input rate of less than ten (10) million BTU per hour shall be 0.40 pounds per million BTU of heat input.

2. The maximum allowable particulate emission rate for new sources in an installation of indirect heating sources with a heat input rate equal to or greater than ten (10) million BTU per hour or less than or equal to one thousand (1,000) million BTU per hour shall be determined by the following equation:

$$E = 0.80(Q)^{-0.301}$$

where

E = the maximum allowable particulate emission rate in pounds per million BTU of heat input, rounded off to two (2) decimal places, and

Q = the installation heat input in millions of BTU per hour.

3. The maximum allowable particulate emission rate for new sources in an installation of indirect heating sources with a heat input rate greater than one thousand (1,000) million BTU per hour shall be 0.10 pounds per million BTU of heat input.

(4) Compliance with this rule shall be accomplished by any installation as expeditiously as practicable, but in no case shall final compliance extend beyond three (3) years from the effective date of this rule. In the interim each installation shall meet the allowable particulate emission rate applicable to that installation on October 25, 1978.

(5) Alternate Method of Compliance

(A) Compliance with this rule may also be demonstrated if the weighted average emission rate of two (2) or more indirect heating sources is less than or equal to the maximum allowable particulate emission rate determined in section (2) or (3). The weighted average emission rate for the indirect heating sources to be averaged shall be calculated by the following formula:

$$WAER = \frac{\sum_{i=1}^{n} (ER_i \cdot Q_i)}{\sum_{i=1}^{n} Q_i}$$

where

WAER = the weighted average emission rate in pounds per million BTU's.

ER_i = the actual emission rate of the i^{th} indirect heating source in pounds per million BTU's.

Q_i = the rated heat input of the i^{th} indirect heating source in millions of BTU's per hour.

N = the number of indirect heating sources in the average.

(B) Installations demonstrating compliance with this rule in accordance with the requirements of section (5) shall do so by making written application to the director. Such application shall include the calculations performed in subsection (5)(A) and all necessary information relative to making this demonstration. After written approval by the director, the emission rates (ER) used in the calculations of subsection (5)(A) shall become the maximum allowable particulate emission rates for each specified indirect heating source under this rule.

(C) Section (5) shall only apply—

1. To indirect heating sources while burning coal, and

2. If the maximum allowable particulate emission rate determined in subsection (5)(B) for each indirect heating source does not exceed the maximum allowable particulate emission rate determined for that source from sections (2) or (3) using the

rated heat input, Q_i, for that individual indirect heating source as if that individual indirect heating source was the only such source at the installation.

10 CSR 10-2.040

EPA Rulemakings

CFR: 40 C.F.R. 52.1320(c)(48)

FRM: 50 FR 3337 (1/24/85)

PRM: None

State Submission: 9/24/84

State Proposal: 9 MR 558 (4/2/84)

State Final: 9 MR 1368 (9/4/84)

APDB File: MO-56

Description: The EPA approved a revision to the regulation which streamlined all of the fuel-burning rules in the state by eliminating illustrative graphs and tables, and by converting the equation to exponential form.

CFR: 40 C.F.R. 52.1320(c)(16)(viii)

FRM: 45 FR 24140 (4/9/80) and 45 FR 46806 (7/11/80)(correction)

PRM: 44 FR 61384 (10/25/79)

State Submission: 6/29/79

State Proposal: 3 MR 579 (9/1/78)

State Final: 4 MR 115 (2/1/79)

APDB File: MO-01

Description: The EPA approved a new version of the regulation as part of the Part D SIP for the Kansas City TSP nonattainment area.

CFR: 40 C.F.R. 52.1320(c)(13)(i)

FRM: 45 FR 17145 (3/18/80)

PRM: 44 FR 52001 (9/6/79)

State Submission: 8/28/78

State Proposal: Unknown

State Final: Unknown

APDB File: MO-03

Description: The EPA approved the recodification of the rule from Regulation III (Kansas City Metropolitan Area) to 10 C.S.R. 10-2.040.

CFR: 40 C.F.R. 52.1320(a)(1)

FRM: 37 FR 10842 (5/31/72)

PRM: None

State Submission: 1/24/72

State Proposal: Unknown

State Final: (effective 1/5/69; revised 2/25/70)

APDB File: MO-00

Description: The EPA approved Regulation III (Kansas City Metropolitan Area) as part of the original SIP submission for controlling particulate matter emissions from fuel-burning equipment used for indirect heating.

Difference Between the State and EPA-Approved Regulation

None.

MO
Outstate Area

10 CSR 10-3.060 Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating

(1) Application. This rule shall apply throughout Missouri except in the City of St. Louis and St. Charles, St. Louis, Jefferson, Franklin, Clay, Cass, Buchanan, Ray, Jackson, Platte and Greene Counties.

(2) Definitions of terms specified in this rule may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) This rule applies to installations in which fuel is burned for the primary purpose of producing steam, hot water or hot air or other indirect heating of liquids, gases or solids and in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels may include for example coal, coke, lignite, coke breeze, gas, fuel oil and wood, but do not include refuse. When any products or by-products of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

(B) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040(2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040(3).

(C) For purposes of this rule, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack(s). The heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater, except in the case of boilers of ten (10) million British thermal units (Btu) or less the heat input can also be determined by the higher heating value (HHV) of the fuel used at maximum operating conditions. The total heat input of all fuel burning units at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

(D) The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5). Any other method which is in accordance with good

professional practice may be used with the consent of the staff director.

(E) This rule shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070. However, indirect heat input values from sources that are subject to New Source Performance Standards shall be used in the calculation of Q (the installation's total heat input).

(F) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission limitations than in this rule shall meet the requirements of 10 CSR 10-6.060 Permits Required.

(4) Emission Limitations for Existing Indirect Heating Sources.

(A) No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following schedule:

1. If the total equipment heat input has a capacity rating of ten (10) million Btu or less, 0.60 pounds for each million Btu per hour input; or

2. If the total equipment heat input has a capacity rating of ten thousand (10,000) million Btu or more, 0.18 pounds for each million Btu per hour input.

(B) The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating between ten (10) million and ten thousand (10,000) million Btu shall be determined by use of the following equation:

$$E = 0.90(Q)^{-0.174}$$

where
E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and

Q = the installation heat input in millions of Btu per hour.

(5) Emission Limitation for New Indirect Heating Sources.

(A) No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following schedule:

1. If the total equipment heat input has a capacity rating of ten (10) million Btu or less, 0.60 pounds for each million Btu per hour input; or

2. If the total equipment heat input has a capacity rating of two thousand (2000) million Btu or more, 0.10 pounds for each million Btu per hour input.

(B) The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating between ten (10) million and two thousand (2000) million Btu shall be determined by use of the following equation:

$$E = 1.31(Q)^{-0.338}$$

where

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and

Q = the installation heat input in millions of Btu per hour.

(6) Compliance Schedule for Existing Sources. Existing burning equipment used for indirect heating shall be modified or rebuilt in compliance with section (4) in accordance with the following schedule: rated capacity—ten thousand (10,000) million or greater Btu heat input per hour; latest date for compliance; January 1, 1972; and rated capacity—ten (10) million to nine thousand nine hundred ninety-nine (9,999) million Btu heat input per hour; latest date for compliance, January 1, 1973.

10 CSR 10-3.060

EPA Rulemakings

CFR: 40 C.F.R. 52.1320(c)

FRM: 68 FR 12831 (03/18/2003)

PRM: 68 FR 12886 (03/18/2003)

State Submission: 11/08/2002

State Final: 10 C.S.R. 10-3 (10/31/2002)

APDB File: MO-212 and MO-213

Description: This rule, which applies to the out-state area, was revised to make it consistent with the other indirect heating regulations in the state and to make clerical corrections and clarifications.

CFR: 40 C.F.R. 52.1320(c)(48)

FRM: 50 FR 3337 (1/24/85)

PRM: None

State Submission: 9/24/84

State Proposal: 9 MR 560 (4/2/84)

State Final: 9 MR 1369 (9/4/84)

APDB File: MO-56

Description: The EPA approved a revision to the regulation which streamlined all of the fuel burning rules in the state by eliminating illustrative graphs and tables and by converting the equation to exponential form.

CFR: 40 C.F.R. 52.1320(c)(27)

FRM: 46 FR 27932 (5/22/81) and 49 FR 38103 (9/27/84) (correction), and
54 FR 41094 (10/5/89) (correction)

PRM: 46 FR 7007 (1/22/81)

State Submission: 9/2/80

State Proposal: 4 MR 306 (4/2/79)

State Final: 4 MR 1300 (11/1/79)

APDB File: MO-18

Description: The EPA approved a revision which deleted malfunction provisions in conjunction with adoption of new Rule 10 C.S.R. 10-6.050.

CFR: 40 C.F.R. 52.1320(c)(13)(i) and (ii)

FRM: 45 FR 17145 (3/18/80)

PRM: 44 FR 52001 (9/6/79)

State Submission: 8/28/78

State Proposal: Recodification: Unknown 2 MR 490 (9/1/77)
↓

State Final: Recodification: Unknown 3 MR 84 (2/1/78)

APDB File: MO-03

Description: The EPA approved recodification of the rule from Regulation S-VI to 10 C.S.R. 10-3.060 as well as the transfer of the definition of terms to 10 C.S.R. 10-6.020.

CFR: 40 C.F.R. 52.1320(a)(1)

FRM: 37 FR 10842 (5/31/72)

PRM: None

State Submission: 1/24/72

State Proposal: Unknown

State Final: (effective 4/3/71; revised 11/9/71)

APDB File: MO-00

Description: The EPA approved Regulation S-VI as part of the original SIP submission.

Difference Between the State and EPA-Approved Regulation

None.

Springfield - Greene Co.

10 CSR 10-4.040 Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating

(1) General Provisions.

(A) This regulation applies to installations in which fuel is burned for the primary purpose of producing steam, hot water or hot air or other indirect heating of liquids, gases or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels may include for example coal, coke, lignite, coke breeze, gas, fuel oil and wood but do not include refuse. When any products or byproducts of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

(B) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040(2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040(3).

(C) For purposes of this regulation, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack(s). The heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater. The total heat input of all fuel burning units at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

(D) The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5). Any other method which is in accordance with good professional practice may be used with the consent of the staff director.

(E) This rule shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070. However, indirect heat input values from sources that are subject to New Source Performance Standards shall be used in the calculation of Q (the installation's total heat input).

(F) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent

emission limitations than in this rule shall meet the requirements of 10 CSR 10-6.060 Permits Required.

(2) Emission Limitations for Existing Indirect Heating Sources.

(A) No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following schedule:

1. If the total equipment heat input has a capacity rating of ten (10) million British thermal units (Btu) or less, 0.60 pounds for each million Btu per hour input; or

2. If the total equipment heat input has a capacity rating of ten thousand (10,000) million Btu or more, 0.18 pounds for each million Btu per hour input.

(B) The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating between ten (10) million and ten thousand (10,000) million Btu shall be determined by use of the following equation:

$$E = 0.90(Q)^{-0.174}$$

where

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and

Q = the installation heat input in millions of Btu per hour.

(3) Emission Limitations for New Indirect Heating Sources.

(A) No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following schedule:

1. If the total equipment heat input has a capacity rating of ten (10) million Btu or less, 0.60 pounds for each million Btu per hour input; or

2. If the total equipment heat input has a capacity rating of two thousand (2,000) million Btu or more, 0.10 pounds for each million Btu per hour input.

(B) The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating between ten (10) million and two thousand (2,000) million Btu shall be determined by use of the following equation:

$$E = 1.31(Q)^{-0.338}$$

where

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and

Q = the installation heat input in millions of Btu per hour.

10 CSR 10-4.040

EPA Rulemakings

CFR: 40 C.F.R. 52.1320(c)

FRM: 68 FR 12831 (03/18/2003)

PRM: 68 FR 12886 (03/18/2003)

State Submission: 11/08/2003

State Final: 10 C.S.R. 10-4 (10/31/2002)

APDB File: MO-212 and MO-213

Description: This rule, which applies to the Missouri Springfield-Greene County area, was revised to make it consistent with the other indirect heating regulations and to make clerical corrections and clarifications.

CFR: 40 C.F.R. 52.1320(c)(48)

FRM: 50 FR 3337 (1/24/85)

PRM: None

State Submission: 9/24/84

State Proposal: 9 MR 563 (4/2/84)

State Final: 9 MR 1371 (9/4/84)

APDB File: MO-56

Description: The EPA approved a revision to the regulation which streamlined all of the fuel burning rules in the state by eliminating illustrative graphs and tables, and by converting the equation to exponential form.

CFR: 40 C.F.R. 52.1320(c)(27)

FRM: 46 FR 27932 (5/22/81) and 49 FR 38103 (9/27/84) (correction), and
54 FR 41094 (10/5/89) (correction)

PRM: 46 FR 7007 (1/22/81)

State Submission: 9/2/80

State Proposal: 4 MR 307 (4/2/79)

State Final: 4 MR 1302 (11/1/79)

APDB File: MO-18

Description: The EPA approved a revision which deleted malfunction provisions in conjunction with adoption of new Rule 10 C.S.R. 10-6.050.

CFR: 40 C.F.R. 52.1320(c)(13)(i)

FRM: 45 FR 17145 (3/18/80)

PRM: 44 FR 52001 (9/6/79)

State Submission: 8/28/78

State Proposal: Unknown

State Final: Unknown

APDB File: MO-03

Description: The EPA approved the recodification of the rule from Regulation III (Springfield-Greene County) to 10 C.S.R. 10-4.040.

CFR: 40 C.F.R. 52.1320(a)(1)

FRM: 37 FR 10842 (5/31/72)

PRM: None

State Submission: 1/24/72

State Proposal: Unknown

State Final: (effective 12/16/69)

APDB File: MO-00

Description: The EPA approved Regulation III (Springfield-Greene County) as part of the original SIP submission for controlling particulate matter emissions from fuel burning equipment used for indirect heating.

Difference Between the State and EPA-Approved Regulation

None.

RE: language
Basham, Aaron to: Lachala Kemp 09/15/2010 03:26 PM

History: This message has been replied to.

Basham, Aaron	*Lachala, is there a good time tomorrow to talk about the excel sheet se*

Lachala, is there a good time tomorrow to talk about the excel sheet sent to show anti-backsliding?

-----Original Message-----
From: Kemp.Lachala@epamail.epa.gov [mailto:Kemp.Lachala@epamail.epa.gov]
Sent: Tuesday, September 14, 2010 1:59 PM
To: Basham, Aaron
Subject: language

Hi Aaron,

Below is suggestive language for 1(C)

An installation's compliance with 10 CSR 10-6.070 would be deemed compliance with 10 CSR 10-6.405, however the heat input from such installation must be included in the calculation of the Q (the installation's total heat input) as defined in subsection (3)(E) of this rule.

Also, we were to suggest language for (5) Test Methods (this actually refers to the second sentence in section (4), that we suggest you move to section (5).

Below is some language used by other States.

Kansas: "[or] any alternative or miscellaneous test procedures currently approved by the USEPA and published in the federal register prior to the effective date of this regulation."

or

"or other recognized method as approved by the department" (rather than the director)

Nebraska: "any [other] method approved for the source and incorporated into an operating permit"

or

"any other test, monitoring, or information-gathering method that produces information comparable to that produced by [any other method specified in the rule]."

Thanks,

Lachala R. Kemp
Air and Waste Management Division
Air Planning and Development Branch
U.S. EPA Region VII
901 N. 5th St.
Kansas City, Kansas 66101
913.551.7214

To recognize opportunity is the difference between success and failure.

MO's draft Indirect Heating Rule- my comments

Tracey Casburn to: Lachala Kemp
Cc: Robert Patrick, Alex Chen

09/14/2010 03:13 PM

Lachala,

In addition to my suggestion (shown in Sheet 2) in the attached, I would still recommend a language change to (1)(C) to something like (from my notes from an internal meeting 8-4-10) :

An installation's compliance with 10 CSR 10-6.070 would be deemed compliance with 10 CSR 10-6.405, however the heat input from such installation must be included in the calculation of the the Q (the installation's total heat input) as defined in subsection (3)(E) of this rule.

If they make this change they could delete (3)(C).

Comments on MO's Indirect Heating spreadsheet 09-14-10.xls

----- Forwarded by Tracey Casburn/R7/USEPA/US on 09/14/2010 10:43 AM -----

From:	"Basham, Aaron" <aaron.basham@dnr.mo.gov>
To:	Lachala Kemp/R7/USEPA/US@EPA, Tracey Casburn/R7/USEPA/US@EPA
Cc:	"Vit, Wendy" <wendy.vit@dnr.mo.gov>, "Graf, Wayne" <wayne.graf@dnr.mo.gov>
Date:	09/13/2010 03:57 PM
Subject:	6.405 draft

Lachala, attached is a draft version for the consolidation of the Indirect Heating Rules. The changes made are in bold to the rule. We will need your final thoughts about the changes and other items by this Thursday, September 16, 2010 as we will proceed with the rule amendment after this date. If you have any questions or comments please let me know. 6.405.doc

* language for 1(C) & 3(C) he's going to add & delete 3(C)
* Need to change 3(G)(2) to be very clear on how the averging is applied vs. the PTE from the chart in 3(E)
* Open in the rule. Doesn't actually define that.

allowing averaging is applied facility wide

w/out averaging: use total heat input to find ER then apply emission rate each unit for compliance.

Acid Rain
Tit. II allows for averaging among unit.
Boiler MACT 5(d) allows for averaging. w/ wiggle room
* Still need to show that emissions won't ↑ ~~to come up~~ allowed by averaging -

Sheet 2 = mine

Without Averaging

EnerMet Plant	Unit		Nameplate or HI capacity (mmBtu/hr)	Q^-.174	PM Rate lbs/mmBtu (E= 0.90* Q^-0.174)
	6	Coal	1668		
	7	Coal	1668		
	8	Coal	1640		
	Sm.	Natural Gas	300		
			5276	0.2251	0.2026

Step 1: compute nameplate or heat imput capacity.

Step 2: compare nameplate or heat imput capacity to either the "Existing Sources" or the "New Sources" chart to determine the emission rate.

Existing Sources:

Area of State	Heat Input (mmBtu/hour)	Limits for Existing Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	<10	0.6
	>5,000	0.12
	≥10, and ≤5,000	$E=1.09Q^{-0.259}$
Springfield-Greene County and Outstate Missouri	≤10	0.6
	≥10,000	0.18
	>10, and <10,000	$E=0.90Q^{-0.174}$

New Sources:

Area of State	Heat Input (mmBtu/hour)	Limits for New Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	<10	0.4
	>1,000	0.1
	≥10, and ≤1,000	$E=0.80Q^{-0.301}$
Springfield-Greene County and Outstate Missouri	≤10	0.6
	≥2,000	0.1
	>10, and <2,000	$E=1.31Q^{-0.338}$

With Averaging

EnerMet Plant	Unit		Nameplate or HI capacity (mmBtu/hr)	Actual PM Emissions	Weighted Average Emissions Rate (equation given at (3)(G))
	6	Coal	1668	0.1607	
	7	Coal	1668	0.2043	
	8	Coal	1640	0.1544	
	Sm.	Natural Gas	300	0.0800	
		Total	5276		0.1679

Step 1: compute nameplate or heat imput capacity.

Step 2: compare nameplate or heat imput capacity to either the "Existing Sources" or the "New Sources" chart to determine emission rate (ER).

Step 3: complete equation given at (3)(G) to determine the Weighted Average Emission Rate (WAER).

Step 4: compare the WAER to the ER given by Step 2. If WAER is less than ER the facility can submit its calculations to the department for final determination of which rate the source will be subject to.

Sheet 1 = MO's

1

With Averaging

EnerMet Plant	Unit		Nameplate or HI capacity (mmBtu/hr)	Q^-.174	**PM Limit** E (lb/mmBtu)	**Actual PM Em.**	Averaging
	6	Coal	1668			0.1607	
	7	Coal	1668			0.2043	
	8	Coal	1640			0.1544	
	Sm.	Natural Gas	300			0.0800	
			5276	0.2251	0.2026		0.1679

2

Without Averaging

EnerMet Plant	Unit		Nameplate or HI capacity (mmBtu/hr)	Q^-.174	**PM Limit** E (lb/mmBtu)
	6	Coal	1668		
	7	Coal	1668		
	8	Coal	1640		
	Sm.	Natural Gas	300		
			5276	0.2251	0.2026

1) Is the weighted average emission rate then the maximum allowable emission rate (J10) for the facility as a whole or for each unit at the facility?
2) Is there analysis that shows that use of the average always is less than the chart? Or is MO saying this isn't backsliding because they can only use the WAER equestion as a permit limit if the value is less than th
This would make sense seeming how, according to (3)(G) of the draft rule the facility must submit its calculation to the department before it can be given the WAER as as a maximum allowable emission rate.

ıe chart value given in (3)(E)?

1

With Averaging

EnerMet Plant	Unit		Nameplate or HI capacity (mmBtu/hr)	Q^-.174	PM Limit E (lb/mmBtu)	Actual PM Em.	Averaging
	6	Coal	1668			0.1607	
	7	Coal	1668			0.2043	
	8	Coal	1640			0.1544	
	Sm.	Natural Gas	300			0.0800	
			5276	0.2251	0.2026		0.1679

↑

= Sum of each units PM/each units Capacity

Sum of each units Capacity

2

Without Averaging

EnerMet Plant	Unit		Nameplate or HI capacity (mmBtu/hr)	Q^-.174	PM Limit E (lb/mmBtu)
	6	Coal	1668		
	7	Coal	1668		
	8	Coal	1640		
	Sm.	Natural Gas	300		
			5276	0.2251	0.2026

$$= \frac{(\text{Unit 1 ER} \times \text{Unit 1 HI}) + (\text{unit 2 ER} \times \text{Unit 2 HI}) + (\text{Unit 3 ER} \times \text{Unit 3 HI}) \ldots}{\text{Unit 1 HI} + \text{unit 2 HI} + \text{Unit 3 HI} + \text{Unit 4 HI}}$$

=

① Still need to reconsile 1(C) & 3(C)
② Should move part of (4) to (5) because it is actually a method. ③ Should clarify what needs to be recorded & when it should be reported in (5)

~~2210~~ A

10 CSR 10-6.405 Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating

④ Need to demo no backsliding.

(1) Applicability.

(A) This rule applies throughout the state with additional conditions applicable to the metropolitan areas of Kansas City, Springfield and St. Louis as found in sections (2), and (3) of this rule.

(B) This rule applies to installations in which fuel is burned for the primary purpose of producing steam, hot water or hot air or other indirect heating of liquids, gases or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels may include for example coal, coke, lignite, coke breeze, gas, fuel oil and wood but do not include refuse. When any products or byproducts of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

⑤ explain use of formula ⑥ permit more stringent need to use permitted emission rate

Don't change from (1)(C) to (3)(C) that the source aren't subject, but (3)(C) requires heat input to be calculated in total.

(C) This rule shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070 except as calculated in subsection (3)(C) of this rule.

⑦ Remove director discretion

(2) Definitions.

(A) Existing—Any source which was in being, installed or under construction on the date provided in the following table:

Area of State	Contruction date began on or before
Kansas City Metropolitan Area	February 15, 1979*
St. Louis Metropolitan Area	February 15, 1979*
Springfield-Greene County Area	September 24, 1971
Outstate Area	February 24, 1971

*Exception: If any source subsequently is altered, repaired or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing, but shall be considered as new.

(B) New—Any source which is not an existing source, as defined in subsection (2)(A) of this rule.

(C) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040(2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040(3).

⑧ Applicability section - okay ~~[illegible]~~ with concept. Compliance w/ 10-6.070 is Compliance w/ this rule however these sources heat inputs need to be captured in the

Version 8-4-10

(B) For purposes of this rule, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack(s). The hourly heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater, except in the case of boilers of ten (10) million British thermal units (mmBtu) or less the heat input can also be determined by the higher heating value (HHV) of the fuel used at maximum operating conditions. The total heat input of all fuel burning units used for indirect heating at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

(C) Indirect heat input values from sources that are subject to 10 CSR 10-6.070 New Source Performance Standards shall be used in the calculation of Q (the installation's total heat input).

If facility has a permit that is more stringent than this rule, it must comply w/ the permit limit.

(D) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission limitations than in this rule shall meet the requirements of 10 CSR 10-6.060 Construction Permits Required.

(E) Emission Limitations for Existing Indirect Heating Sources. No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following table:

Area of State	Heat Input (mmBtu/hour)	Limits for Existing Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	<10	0.60
	>5,000	0.12
	≥10, and ≤5,000	$E=1.09Q^{-0.259}$
Springfield-Greene County and Outstate Missouri	≤10	0.60
	≥10,000	0.18
	>10, and <10,000	$E=0.90Q^{-0.174}$

where
E = the maximum allowable particulate emission rate in pounds per mmBtu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in mmBtu per hour.

(F) Emission Limitations for New Indirect Heating Sources. No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following table:

Area of State	Heat Input (mmBtu/hour)	Limits for New Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	≤10	0.40
	>1,000	0.10
	≥10, and ≤1,000	$E=0.80Q^{-0.301}$
Springfield-Greene	≤10	0.60

County and Outstate Missouri	≥2,000	0.10
	>10, and <2,000	$E=1.31Q^{-0.338}$

where
E = the maximum allowable particulate emission rate in pounds per mmBtu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in mmBtu per hour.

(G) Alternate Method of Compliance.

1. Compliance with this rule also may be demonstrated if the weighted average emission rate (ER) of two (2) or more indirect heating sources is less than or equal to the maximum allowable particulate ER determined in subsection (3)(E) or (3)(F) of this rule. The weighted average ER for the indirect heating sources to be averaged shall be calculated by the following formula:

$$WAER = \frac{\sum_{i=1}^{n} (Er_i \times Q_i)}{\sum_{i=1}^{n} Q_i}$$

where
WAER = the weighted average ER in pounds per mmBtu;
ER_i = the actual ER of the ith indirect heating source in pounds per mmBtu;
Q_i = the rated heat input of the ith indirect heating source in mmBtu per hour; and
n = the number of indirect heating sources in the average.

2. Installations demonstrating compliance with this rule in accordance with the requirements of subsection (3)(G) of this rule shall do so by making written application to the director. The application shall include the calculations performed in paragraph (3)(G)1. of this rule and all necessary information relative to making this demonstration. After written approval by the director, the ER used in the calculations of paragraph (3)(G)1. of this rule shall become the maximum allowable particulate ER for each specified indirect heating source under this rule.

3. Subsection (3)(G) of this rule only shall apply--

A. To indirect heating sources while burning coal; and

explain application of this if equation figure once figure WAER - which heat input do you compare it to to figure emission rate?
If using Q, do you look @ each source individually
WAER vs. table ER
Q1 = heat input source 1
WAER vs table ER
Q2 = heat input source 2
WAER vs table ER
Q3 = heat input for source 3
how is this averaging? Just averaging emission rates?

B. If the maximum allowable particulate ER determined in paragraph (3)(G)2. of this rule for each indirect heating source does not exceed the maximum allowable particulate ER determined for that source from subsection (3)(E) or (3)(F) of this rule using the rated heat input, Q_i, for the individual indirect heating source as if that individual indirect heating source was the only such source at the installation.

(4) Reporting and Recordkeeping.

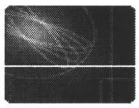
The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5). Any other method which is in accordance with good professional practice may be used with the consent of the staff director. All records must be kept on-site for a period of five (5) years and made available to the department upon request.

(5) Test Methods. *(Not Applicable)*

move?

While consolidating rule we would recommend they remove the staff director clause.

These are federal test methods not subject to director discretion.



Fw: Draft Indirect Heating Rulemaking

Lachala Kemp to: Tracey Casburn, Robert Patrick, Alex Chen 07/28/2010 07:33 AM

All,

See Wayne's email below. I have yet to review this document, but wanted to get it out to you as soon as possible. If necessary, I will set aside some time early next week for us to sit down and discuss.

Thanks,

Lachala R. Kemp
Air and Waste Management Division
Air Planning and Development Branch
U.S. EPA Region VII
901 N. 5th St.
Kansas City, Kansas 66101
913.551.7214

To recognize opportunity is the difference between success and failure.

----- Forwarded by Lachala Kemp/R7/USEPA/US on 07/28/2010 07:32 AM -----

From:	"Graf, Wayne" <wayne.graf@dnr.mo.gov>
To:	Lachala Kemp/R7/USEPA/US@EPA
Cc:	"Vit, Wendy" <wendy.vit@dnr.mo.gov>, "Basham, Aaron" <aaron.basham@dnr.mo.gov>
Date:	07/27/2010 02:13 PM
Subject:	Draft Indirect Heating Rulemaking

Hi Lachala,

Attached is the draft of the consolidated indirect heating rule that we would like to move forward with.

New rule 10 CSR 10-6.405, consolidates 10 CSR 10-2.040, 3.060, 4.040, and 5.030, Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating, into one rule to be applied throughout the state. A summary of the major changes during the consolidation process are as follows:

The averaging provision found in chapter 2 and 5 rules, section (5), is being added to the consolidated rule, subsection (3)(G), as a means of compliance for all areas of the state which would include the chapter 3 and 4 areas. Subsection (1)(D) in each of the chapter specific rules is being moved to section (4) of the consolidated rule, Reporting and Recordkeeping. Summary tables in subsections (2)(A), (3)(E), and (3)(F) are being added to the consolidated rule with no changes to the information found in the original chapter rules as suggested in the workgroup meeting.

Subsections (2)(A) and (3)(A) of chapters 2 and 5 are being removed as these subsections are covered under subsection (3)(B) of the consolidated rule. Section (4) of chapters 2 and 5, and section (6) of chapter 3 are being removed as these sections have become outdated.

As a result of the described changes, and more specifically by adding averaging statewide, backsliding will not occur. Tabulations previously conducted show that the emission limitations prescribed in subsections (3)(E) and (3)(F) of the consolidated rule remain the same with averaging. The averaging provision

provides a tool and offers flexibility for compliance for coal fired units without any socioeconomic impact and without any known detriment to air quality.

Please review this document to make sure there are no SIP approvability issues that should be addressed before we more forward with this rulemaking. If at all possible, please reply within two weeks.

Thank you.

Wayne

6.405(60daysecond)b3.doc

"don't know universe of rule"

"don't know what alternative methods are being used"

"don't know what they are reporting"

Call 8-10-10

- Aaron going to get us an example on how to use the equation

- We'll give them an example of MO Rule w/ Record Keeping and reporting requirements

- ask facilities how they are reporting currently. 9/08/10 Aaron to send

- We'll send them some draft language to reconcile 1(c) & 3(c) – 9/08/10 Lachala to send

- Aaron says that "they possibly could remove the "other method language or at discretion of the director" but would prefer to keep it because it has been in there so long.

- Add more specificity to what alternative methods are. 9/8/10 Aaron to look into.

- Aaron sending chart to explain "no backsliding"

9/08/10 Lachala to send alex largus

cross refer w/ 6.120

6.120 is what Aaron wants to add.

Backsliding? ① doesn't seem to be changing the emission rates. ok ② Metro areas always allowed to average, so okay ③ need Record Keeping, Reporting, Test Methods & clarify needs of (1)(E) & (3)(D)

10 CSR 10-6.405 Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating

(1) Applicability.

(A) This rule applies throughout the state with additional conditions applicable to the metropolitan areas of Kansas City, Springfield and St. Louis as found in sections 2, 4 and 5 **(remove 5 ????)** of this rule.

NO! ←

(B) This rule applies to installations in which fuel is burned for the primary purpose of producing steam, hot water or hot air or other indirect heating of liquids, gases or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels may include for example coal, coke, lignite, coke breeze, gas, fuel oil and wood but do not include refuse. When any products or byproducts of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

(C) This rule shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070 **???except as calculated in (3)(D) ?? or eliminate completely??? Or also exclude 6.075 & 6.080.**

NO

~~to calculated~~ ~~what are these~~ ? NESHAP & MACT

(2) Definitions.

(A) Existing—Any source which was in being, installed or under construction on the date provided in the following table:

Area of State	Contruction date began on or before
Kansas City Metropolitan Area	February 15, 1979*
St. Louis Metropolitan Area	February 15, 1979*
Springfield-Greene County Area	September 24, 1971
Outstate Area	February 24, 1971

*Exception: If any source subsequently is altered, repaired or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing, but shall be considered as new.

Kansas & IA - do they allow averaging - if averaging in metro why not statewide

(B) New—Any source which is not an existing source, as defined in subsection (2)(A) of this rule.

(C) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

Need test requirements.

(3) General Provisions. **(review test reqmts????) (use table to capture differences with one set of text?????)**

(A) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040(2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040(3) **???????**.

6.030 (2) stack test.
6.030(5) PM emissions

(B) For purposes of this rule, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack(s). The **hourly** heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater, except in the case of boilers of ten (10) million British thermal units (Btu) or less the heat input can also be determined by the higher heating value (HHV) of the fuel used at maximum operating conditions. The total heat input of all fuel burning units used for indirect heating at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

(C) The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5). Any other method which is in accordance with good professional practice may be used with the consent of the staff director.

(D) Indirect heat input values from sources that are subject to 10 CSR 10-6.070 New Source Performance Standards shall be used in the calculation of Q (the installation's total heat input). ~~**Major Issue – include or not include??????**~~

(E) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission limitations than in this rule shall meet the requirements of 10 CSR 10-6.060 Construction Permits Required.

(F) Emission Limitations for Existing Indirect Heating Sources. **???Prefer averaging throughout state**

1. Kansas City and St. Louis Metropolitan Areas

A. No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following schedule:

(I) If the total equipment heat input has a capacity rating of less than ten (10) million Btu, 0.60 pounds for each million Btu per hour input; or **???Make units similar throughout**

(II) If the total equipment heat input has a capacity rating of greater than five thousand (5,000) million Btu per hour, 0.12 pounds per million Btu of heat input.

B. The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating equal to or greater than ten (10) million Btu per hour and less than or equal to five thousand (5,000) million Btu per hour shall be determined by the following equation:

$$E = 1.09(Q)^{-0.259}$$

where

need to be moved to test method

Not changing the subjecting of the sources just saying the heat values need to be incorporated in the calculation for the values of the whole facility.

don't double count heat input if source is subject to 6.070, 6.075 & 6.080.

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in millions of Btu per hour.

2. Springfield-Greene County and Outstate Areas.

A. No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following schedule:

(I) If the total equipment heat input has a capacity rating of ten (10) million Btu or less, 0.60 pounds for each million Btu per hour input; or

(II) If the total equipment heat input has a capacity rating of ten thousand (10,000) million Btu or more, 0.18 pounds for each million Btu per hour input.

B. The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating between ten (10) million and ten thousand (10,000) million Btu per hour shall be determined by use of the following equation:

$$E = 0.90(Q)^{-0.174}$$

where
E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in millions of Btu per hour.

(G) Emission Limitations for New Indirect Heating Sources.

1. Kansas City and St. Louis Metropolitan Areas

A. No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following schedule:

(I) If the total equipment heat input has a capacity of less than ten (10) million Btu, 0.40 pounds for each million Btu per hour of input, or

(II) If the total equipment heat input has a capacity rating greater than one thousand (1,000) million Btu, 0.10 pounds for each million Btu per hour input.

B. The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating equal to or greater than ten (10) million Btu per hour and less than or equal to one thousand (1,000) million Btu per hour shall be determined by the following equation:

$$E = 0.80(Q)^{-0.301}$$

where

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and

Q = the installation heat input in millions of Btu per hour.

2. Springfield-Greene County and Outstate Areas.

A. No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following schedule:

(I) If the total equipment heat input has a capacity rating of ten (10) million Btu or less, 0.60 pounds for each million Btu per hour input; or

(II) If the total equipment heat input has a capacity rating of two thousand (2,000) million Btu or more, 0.10 pounds for each million Btu per hour input.

B. The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating between ten (10) million and two thousand (2,000) million Btu per hour shall be determined by use of the following equation:

$$E = 1.31(Q)^{-0.338}$$

where

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and

Q = the installation heat input in millions of Btu per hour.

(4) Reporting and Recordkeeping. *(Not Applicable)*

???Use Title V permit requirements

(5) Test Methods. *(Not Applicable)*

I have it somewhere else cross reference.

* SIP doesn't incorporate III ; IV incorporates SIP recommendation (0.080)

→ Maybe they should refer back to record keeping requirements of rules they are trying to consolidate.

→ What tests are they going to use in order to establish compliance? What record are they generating to report & keep.

3-15-10

Region 7
Toll-free: 1-800-223-0425
www.epa.gov/region07

During a call on March 03, 2010 mo likened its desire to resind its ban on hand fired equipment to revisions EPA approved for 10 CSR 10-5.300. Except ther revisions to (Solvents) was never a resicion.

What can they do:

# of sources & emissions from a rescinded rule = a de minius increase

Then maybe it will work.

Lachala is going to explain what we would need.

3-22-10 They can send us an analysis to support their request. But not likely to prove case.

©

EPA Rulemakings

CFR: 40 C.F.R. 52.1320(c)

FRM: 72 FR 10610 (03/09/2007)

PRM: 72 FR 10626 (03/09/2007)

State Submission: 01/17/2007

State Final: 10 C.S.R. 10-5 (11/30/2006)

APDB File: MO-218; EPA-R07-OAR-2007-0083

Description: This revision includes consolidating exemptions in the applicability section [(1)(C) and (1)(D)]; adding three new exemptions to include solvent metal cleaning operations, flush cleaning operations and hand cleaning/wiping operations; adding definitions of new and previously undefined terms to include flush cleaning, hand cleaning/wiping operation, nonaqueous solvent, and spray gun cleaner; and clarifying rule language regarding operating procedure requirements for spray gun cleaners and air-tight and airless cleaning systems.

- exempt facilities under MACT
- MACT is at least as stringent
- Exempt only if comply w/MACT
- also in solvent clean-up operations 0.555 @ least as stringent

---

CFR: 40 C.F.R. 52.1320(c)

FRM: 67 FR 70317 (11/22/2002)

PRM: 67 FR 70357 (11/22/2002)

State Submission: 08/20/2002

State Final: 10 C.S.R. 10-5 (5/30/2002)

APDB File: MO-200

Description: This revision allows the use of a higher vapor pressure solvent to clean paint spray guns and nozzles, and it also requires that when the higher vapor pressure solvent is used for this purpose that it be used with closed-top cleaning machines only. This update also revised the order and numbering of the rule sections to be consistent with the new standard rule format.

So no relaxation because the other rules prevent backsliding

MO submitted a demo that there would be an increase in VOC change 0.79 lbs day and we agreed that was demminimus. Don how worked w/ RFP

CFR: 40 C.F.R. 52.1320(c)

FRM: 65 FR 31485 (5/18/00)

PRM: 65 FR 8083 (2/17/00)

State Submission: 11/12/99

State Final: 10 C.S.R. 10-5 (5/30/98)

APDB File: MO-136

Description: This revision specifies equipment operating procedures and training requirements for the reduction of volatile organic compound emissions from solvent metal cleaning operations in the St Louis metropolitan area.

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10 CSR 10-5.300

CFR: 40 C.F.R. 52.1320(c)(79)(i)(B)

FRM: 59 FR 43480 (8/24/94), Correction Notice 60 FR 16806 (4/3/95)

PRM: 57 FR 32191 (7/21/92)

State Submission: 11/20/91

State Proposal: 16 MR 989 (7/1/91)

State Final: 10 C.S.R. 10-5 (11/29/91)

APDB File: MO-100

Description: This revision updated this rule to include the correct reference method specified in 10 C.S.R. 10-6.030.

CFR: 40 C.F.R. 52.1320(c)(71)(i)(B)

FRM: 55 FR 7712 (3/5/90)

PRM: 54 FR 43183 (10/23/89)

State Submission: 3/30/89

State Proposal: 13 MR 1704 (10/17/89)

State Final: 14 MR 327 (3/1/89) and 14 MR 847 (6/19/89) (correction)

APDB File: MO-75

Description: The EPA approved revisions to the regulation which: (1) tightened recordkeeping requirements, (2) requires degreasers to be shut down if leaks or malfunctions occur, (3) established requirements for the disposal of waste material, and (4) made other miscellaneous changes.

CFR: 40 C.F.R. 52.1320(c)(16)(i)

FRM: 45 FR 24140 (4/9/80) and 45 FR 56806 (7/11/80) (correction)

PRM: 44 FR 61384 (10/25/79)

State Submission: 6/29/79

State Proposal: 3 MR 943 (12/1/78)

State Final: 4 MR 496 (6/1/79)

APDB File: MO-01

Description: The EPA approved a new regulation to control emissions from solvent metal cleaning or degreasing as part of the Part D ozone SIP.

Difference Between the State and EPA-Approved Regulation

None.

10 CSR 10-5.040 Use of Fuel in Hand-Fired Equipment Prohibited

(1) General.

(A) This regulation shall apply to all fuel-burning equipment including, but not limited to, furnaces, heating and cooking stoves and hot water furnaces. It shall not apply to wood-burning fireplaces and wood-burning stoves in dwellings, nor to fires used for recreational purpose, nor to fires used solely for the preparation of food by barbecuing.

(B) Hand-fired fuel-burning equipment is any stove, furnace or other fuel-burning device in which fuel is manually introduced directly into the combustion chamber.

(2) Prohibition.

(A) After three (3) years from the effective date of this regulation, it shall be unlawful to operate any hand-fired fuel-burning equipment in the St. Louis, Missouri metropolitan area.

(B) The executive secretary may order that any hand-fired fuel-burning equipment not be used at any time earlier than three (3) years from the adoption of this regulation whenever such equipment has been found in violation of any air contaminant emission regulation on three or more occasions in any six-month period.

110(L) no backsliding - changes as long as prove that there isn't interference w/the NAAQs.

193 - no changes to rates established prior to 1991 unless you get offsets.

Difference between 5.300 & 5.040

1. 5.300 was Notification.
2. 5.300 outlined other rules that backed up the exemptions given - under MACT rule a subject to 5.555.

10 CSR 10-5.040

EPA Rulemakings

CFR: 40 C.F.R. 52.1320(c)(13)(i)

FRM: 45 FR 17145 (3/18/80)

PRM: 44 FR 52001 (9/6/79)

State Submission: 8/28/78

State Proposal: Unknown

State Final: Unknown

APDB File: MO-03

Description: The EPA approved recodification of the rule from Regulation III (St. Louis Metropolitan Area) to 10 C.S.R. 10-5.040.

CFR: 40 C.F.R. 52.1320(a)(2)

FRM: 37 FR 10842 (5/31/72)

PRM: None

State Submission: 1/24/72

State Proposal: Unknown

State Final: (effective 3/24/67; revised 9/18/70)

APDB File: MO-00

Description: The EPA approved Regulation III (St. Louis Metropolitan Area) as part of the original SIP submission.

Difference Between the State and EPA-Approved Regulation

None.

10 CSR 10-5.030 Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

(1) General Provisions.

(A) This rule applies to installations which have indirect heating sources.

(B) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040, section (2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040, section (3).

(C) The heat input used for each indirect heating source shall be the equipment manufacturer's or designer's guaranteed maximum input in millions of BTU's per hour, whichever is greater.

(D) The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030, section (5).

(E) For the purpose of this rule only, the following terms shall have the meaning ascribed below:

1. Existing—means any source which was in being, installed or under construction on February 15, 1979, except that if any source is subsequently altered, repaired or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing, but shall be considered as new; and

2. New—means any source which is not an existing source, as defined in paragraph (1)(E)1.

(F) This regulation shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070.

(G) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission limitations than in this rule, shall meet the requirements of 10 CSR 10-6.060, Permits Required.

(2) Maximum Allowable Particulate Emission Rate from Existing Indirect Heating Sources.

(A) The total heat input of all existing indirect heating sources within an installation shall be used to determine the

maximum allowable particulate emission rate, which is to be applied to each existing indirect heating source within the installation. Thereafter, each indirect heating source within the installation shall be tested and considered independently for compliance with this rule.

(B) Emission Limitations.

1. The maximum allowable particulate emission rate for an installation of existing indirect heating sources with a heat input rate of less than 10 million BTU per hour shall be 0.60 pounds per million BTU of heat input.

2. The maximum allowable particulate emission rate for an installation of existing indirect heating sources with a heat input rate equal to or greater than ten (10) million BTU per hour and less than or equal to five thousand (5000) million BTU per hour shall be determined by the following equation:

$$E = 1.09(Q)^{-0.259}$$

where
E = the maximum allowable particulate emission rate in pounds per million BTU of heat input, rounded off to two (2) decimal places, and

Q = the installation heat input in millions of BTU per hour.

3. The maximum allowable particulate emission rate for an installation of existing indirect heating sources with a heat input rate greater than 5,000 million BTU per hour shall be 0.12 pounds per million BTU of heat input.

(3) Maximum Allowable Particulate Emission Rate from New Indirect Heating Sources.

(A) The total heat input of all new and existing indirect heating sources within an installation shall be used to determine the maximum allowable particulate emission rate, which is to be applied to each new indirect heating source within the installation. The maximum allowable particulate emission rate from the existing indirect heating sources within such installation shall be determined as specified by 10 CSR 10-5.030, section (2). Thereafter, each indirect heating source within the installation shall be tested and considered independently for compliance with this rule.

(B) Emission Limitations.

1. The maximum allowable particulate emission rate for new sources in an installation of indirect heating sources with a heat input rate of less than 10 million BTU per hour shall be 0.40 pounds per million BTU of heat input.

2. The maximum allowable particulate emission rate for new sources in an installation of indirect heating sources with a heat input rate equal to or greater than ten (10) million BTU per hour and less than or equal to one thousand (1000) million BTU per hour shall be determined by the following equation:

$$E = 0.80(Q)^{-0.301}$$

where
E = the maximum allowable particulate emission rate in pounds per million BTU of heat input, rounded off to two (2) decimal places, and

Q = the installation heat input in millions of BTU per hour.

3. The maximum allowable particulate emission rate for new sources in an installation of indirect heating sources with a heat input rate greater than 1,000 million BTU per hour shall be 0.10 pounds per million BTU of heat input.

(4) Compliance with this rule shall be accomplished by any installation as expeditiously as practicable, but in no case shall final compliance extend beyond three (3) years from the effective date of this rule. In the interim each installation shall meet the allowable particulate emission rate applicable to the installation on October 25, 1978.

(5) Alternate Method of Compliance.

(A) Compliance with this rule may also be demonstrated if the weighted average emission rate of two (2) or more indirect heating sources is less than or equal to the maximum allowable particulate emission rate determined in section (2) or (3).

1. The weighted average emission rate for the indirect heating sources to be averaged shall be calculated by the following formula:

$$WAER = \frac{\sum_{i=1}^{n} (ER_i \cdot Q_i)}{\sum_{i=1}^{n} Q_i}$$

where
WAER = the weighted average emission rate in pounds per million BTU's.
ER_i = the actual emission rate of the i^{th} indirect heating source in pounds per million BTU's.
Q_i = the rated heat input of the i^{th} indirect heating source in millions of BTU's per hour.
n = the number of indirect heating sources in the average.

(B) Installations demonstrating compliance with this rule in accordance with the requirements of section (5) shall do so by making written application to the director. Such application shall include the calculations performed in paragraph (5)(A)1. and all necessary information relative to making this demonstration. After written approval by the director, the emission rates (ER) used in the calculations of paragraph (5)(A)1. shall become the maximum allowable particulate emission rates for each specified indirect heating source under this rule.

(C) Section (5) shall only apply—

1. To indirect heating sources while burning coal; and

2. If the maximum allowable particulate emission rate determined in subsection (5)(B) for each indirect heating source does not exceed the maximum allowable particulate emission rate determined for that source from section (2) or (3) using the rated heat input, Q_i, for that individual indirect heating source as if that individual indirect heating source was the only such source at the installation.

CFR: 40 C.F.R. 52.1320(c)(48)

FRM: 50 FR 3337 (1/24/85)

PRM: None

State Submission: 9/24/84

State Proposal: 9 MR 565 (4/2/84)

State Final: 9 MR 1372 (9/4/84)

APDB File: MO-56

Description: The EPA approved a revision to the regulation which streamlined all of the fuel-burning rules in the state by eliminating illustrative graphs and tables and by converting the equation to exponential form.

CFR: 40 C.F.R. 52.1320(c)(16)(v)

FRM: 45 FR 24140 (4/9/80) and 45 FR 46806 (7/11/80) (correction)

PRM: 44 FR 61384 (10/25/79)

State Submission: 6/29/79

State Proposal: 3 MR 583 (9/1/78)

State Final: 4 MR 119 (2/1/79)

APDB File: MO-01

Description: The EPA approved a new version of the regulation as part of the Part D SIP for the St. Louis TSP nonattainment area.

CFR: 40 C.F.R. 52.1320(c)(i)

FRM: 45 FR 17145 (3/18/80)

PRM: 44 FR 52001 (9/6/79)

State Submission: 8/28/78

State Proposal: Unknown

State Final: Unknown

APDB File: MO-03

Description: The EPA approved the recodification of the rule from Regulation II (St. Louis Metropolitan Area) to 10 C.S.R. 10-5.030.

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10 CSR 10-5.030

CFR: 40 C.F.R. 52.1320(a)(2)

FRM: 37 FR 10842 (5/31/72)

PRM: None

State Submission: 1/24/72

State Proposal: Unknown

State Final: (effective 3/24/67; revised 9/18/70)

APDB File: MO-00

Description: The EPA approved Regulation II (St. Louis Metropolitan Area) as part of the original SIP submission for controlling particulate matter emissions from fuel-burning equipment used for indirect heating.

Difference Between the State and EPA-Approved Regulation

The rule is identical to the state's rule except for a minor difference in internal numbering in section (5)(A).

Permit: did the facility go through a permitting exercise

Section 193 - if NAA and want to change ~~control equipment~~ requirements ~~strategy~~ in effect prior to 1990 unless reductions gained will be offset by greater reductions from other controls in the NAA.

↑ as result of modification need to demo ↓ somewhere else.

Variance - source still in violation of SIP even if the state okays the variance.

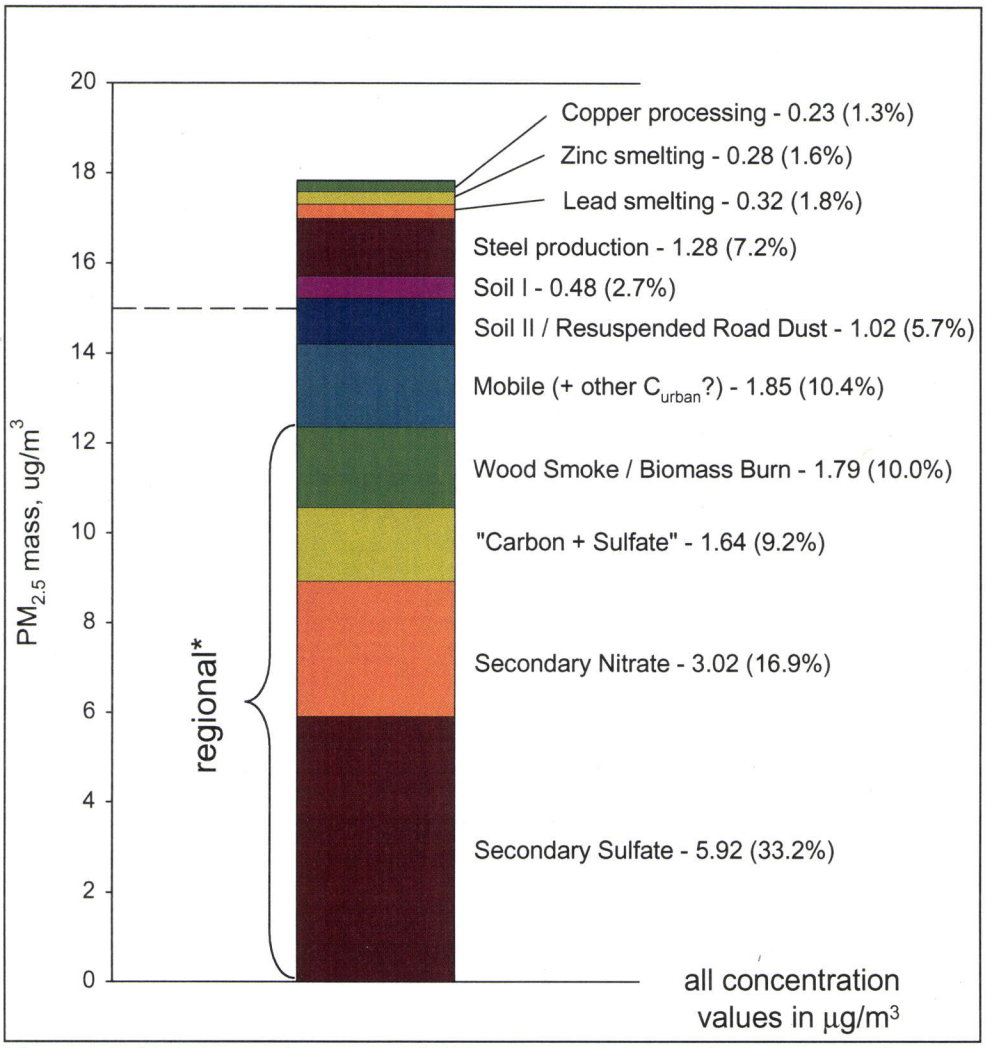


Figure 2-20. Apportionment of $PM_{2.5}$ mass at East St. Louis by Positive Matrix Factorization (EPA PMF). Data from June 2001 to May 2003.

Wayne
Paul
Wendy
Me
Rachela

HUNT INDUSTRIAL SERVICE CORPORATION

2244 Front Street
Pevely, MO 63070

Phone 636-479-5893
Fax 636-479-9211

September 21, 2009

Mr. Gary Pendergrass, Chairman
Missouri Air Conservation Commission
c/o Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102

RE: VARIANCE FROM USE OF HAND-FIRED EQUIPMENT

Dear Mr. Pendergrass:

We are seeking variance from the prohibited use of hand-fired fuel burning equipment, **CSR 10-5.040 Use of Fuel in Hand-Fired Equipment prohibited. .**

Our business offers pallet repair and warehousing. Scrap wood is a by product of the pallet repair. The scrap wood is burned in our furnace (1) and wood boilers (2) as a source of heat for our employees during business hours. The furnace is located inside our repair area and the 2 boilers are located outside the warehouses. The boilers are low combustion heat sources.

Our repair areas and warehouses have tall ceilings and are therefore, difficult to heat. The wood fired furnace & boilers provide a very economical heat source. We are a small business and conversion to another source of heating would cost well over $10,000 plus the fuel the must be purchased for each heating season.

The small amount of wood we use **ONLY** during the heating season produces an estimated:

• PM10	7.2 lbs/week x 22 weeks	158.40 lbs.
• NOx	9.8 lbs/week x 22 weeks	215.60 lbs
• SO2	0.5 lbs/week x 22 weeks	11.00 lbs
• VOC	0.34 lbs/week x 22 weeks	7.48 lbs.
• CO	12.0 lbs/week x 22 weeks	264.00 lbs.

We are in a rural area and many people in the surrounding area heat with indoor wood furnaces or outdoor wood boilers. There is actually an outdoor boiler located at a residence about 500 feet from our business.

What is the burning season?
What is the heat throughput of these units?
How did the state determine that there was no impact to air quality?

Please allow us the variance to use the wood furnace and boilers. It might be the difference between staying in business in these tough economic times and closing our doors. Would the Commission take a look at permanently changing the rule #**CSR 10-5.040**, so others can legally heat their businesses this low cost fuel?

Thanks for your consideration.

Sincerely,

Debra Hunt

Debra Hunt

Missouri
Department of
Natural Resources

MEMORANDUM

DATE:

TO: Missouri Air Conservation Commission

FROM: Mark N. Templeton, Director
Department of Natural Resources

SUBJECT: Variance Request – Hunt Industrial Service Corporation

On September 24, 2009, the Missouri Department of Natural Resources' Air Pollution Control Program received a variance request from the Hunt Industrial Service Corporation. Hunt is located in Pevely, Missouri, in Jefferson County. At this location, Hunt conducts pallet repair and warehousing. During the course of their operations, Hunt creates a significant amount of untreated scrap wood. Since starting this business, Hunt has used this scrap wood as fuel in a furnace and two boilers to heat their business and keep circulating water from freezing. Hunt was unaware until June 2009 that the use of their hand-fired equipment is prohibited by Missouri State Rule 10 CSR 10-5.040, "*Use of Fuel in Hand-Fired Equipment.*"

Since August 2009, Hunt has been involved in discussions with the APCP concerning this matter. Hunt is a small business that will be adversely affected economically if they cannot use this source of fuel for their business. Hunt is requesting a variance from 10 CSR 10-5.040 to allow them to continue using their hand-fired equipment for heating purposes.

Hunt and the Department agree that to require immediate compliance would have a severe negative economic impact on their operations. Based upon the fact the emissions from the use of this fuel and equipment would have no impact on air quality, the Department recommends the Missouri Air Conservation Commission grant a variance to Hunt for a period of one year.

Thank you for your consideration of this recommendation.

MNT:sfs

* granted a variance for one year.
* have another variance ~~[illegible]~~ in house but have not acted on it because they're waiting

* section 193
* 5300 - 1978 solvent metal - IM rule (?)

Solvent metal cleaning
Jan 1, 1978
May 30, 1998

emissions resulting from small sources would be so small - they could put in an exemption level.

Change so small that they would be negligible compared to holistic emissions

✓ tracey - send Wendy email to rate calculator and Linn County DEQ

96,287 BTU/hour to heat a

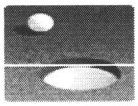
40 x 40 room w/ 14 foot ceiling
~~30~~ feet of doors 40 feet of windows.

1 fireplace

* send RH email again and ask more on what we have or want to revisit?

25,692 BTU/hour

20 x 20 building w/ 14 ft ceilings.
20 sq. feet of doors & 105 sq. feet of windows + 1 fireplace.



indirect heating rule language

Alex Chen to: Lachala Kemp, Tracey Casburn, Robert Patrick 08/10/2010 09:36 AM

Hey guys,

Just to point out - 10 CSR 10-6.030(19) (which is titled Alternate Sampling Method) states: "An alternate sampling method to any method referenced in this rule may be used provided it is in accordance with good professional practice, provides results of at least the same accuracy and precision as the replaced method and receives the approval of the director for its use."

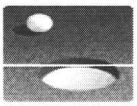
We could suggest that for 10 CSR 10-6.405(4) that MDNR simply borrow this already existing language. If we're trying to take the director's discretion out of it, perhaps we could just say:

"Any other alternate sampling method may be used provided it is in accordance with good professional practice and provides results of at least the same accuracy and precision as the methods specified in 10 CSR 10-6.030(5)."

I'll look around and see what other states have in this regard.

Thanks,
Alex

Alex Chen
Senior Counsel
US EPA Region 7
(913) 551-7962



more language

Alex Chen to: Lachala Kemp, Tracey Casburn, Robert Patrick 08/10/2010 09:55 AM

Quick glance through some of other states:

Kansas uses the following language:

"[or] any alternative or miscellaneous test procedures currently approved by the USEPA and published in the federal register prior to the effective date of this regulation."

or

"or other recognized method as approved by the department" (rather than the director)

Nebraska:

"any [other] method approved for the source and incorporated into an operating permit"

or

"any other test, monitoring, or information-gathering method that produces information comparable to that produced by [any other method specified in the rule]."

Hope these help! -- Alex

Alex Chen
Senior Counsel
US EPA Region 7
(913) 551-7962

10 CSR 10-6.405 Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating

(1) Applicability.

(A) This rule applies throughout the state with additional conditions applicable to the metropolitan areas of Kansas City, Springfield and St. Louis as found in sections (2), and (3) of this rule.

(B) This rule applies to installations in which fuel is burned for the primary purpose of producing steam, hot water or hot air or other indirect heating of liquids, gases or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels may include for example coal, coke, lignite, coke breeze, gas, fuel oil and wood but do not include refuse. When any products or byproducts of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

(C) This rule shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070 except as calculated in subsection (3)(C) of this rule.

(2) Definitions.

(A) Existing—Any source which was in being, installed or under construction on the date provided in the following table:

Area of State	Contruction date began on or before
Kansas City Metropolitan Area	February 15, 1979*
St. Louis Metropolitan Area	February 15, 1979*
Springfield-Greene County Area	September 24, 1971
Outstate Area	February 24, 1971

*Exception: If any source subsequently is altered, repaired or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing, but shall be considered as new.

(B) New—Any source which is not an existing source, as defined in subsection (2)(A) of this rule.

(C) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040(2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040(3).

(B) For purposes of this rule, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack(s). The hourly heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater, except in the case of boilers of ten (10) million British thermal units (mmBtu) or less the heat input can also be determined by the higher heating value (HHV) of the fuel used at maximum operating conditions. The total heat input of all fuel burning units used for indirect heating at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

(C) Indirect heat input values from sources that are subject to 10 CSR 10-6.070 New Source Performance Standards shall be used in the calculation of Q (the installation's total heat input).

(D) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission limitations than in this rule shall meet the requirements **of the permis issued under** 10 CSR 10-6.060 Construction Permits Required.

(E) Emission Limitations for Existing Indirect Heating Sources. No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following table:

Area of State	Heat Input (mmBtu/hour)	Limits for Existing Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	<10	0.60
	>5,000	0.12
	≥10, and ≤5,000	$E=1.09Q^{-0.259}$
Springfield-Greene County and Outstate Missouri	≤10	0.60
	≥10,000	0.18
	>10, and <10,000	$E=0.90Q^{-0.174}$

where
E = the maximum allowable particulate emission rate in pounds per mmBtu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in mmBtu per hour.

(F) Emission Limitations for New Indirect Heating Sources. No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following table:

Area of State	Heat Input (mmBtu/hour)	Limits for New Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	<10	0.40
	>1,000	0.10
	≥10, and ≤1,000	$E=0.80Q^{-0.301}$

Springfield-Greene County and Outstate Missouri	≤10	0.60
	≥2,000	0.10
	>10, and <2,000	$E=1.31Q^{-0.338}$

where
E = the maximum allowable particulate emission rate in pounds per mmBtu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in mmBtu per hour.

(G) Alternate Method of Compliance.

1. Compliance with this rule also may be demonstrated if the weighted average emission rate (ER) of two (2) or more indirect heating sources is less than or equal to the maximum allowable particulate ER determined in subsection (3)(E) or (3)(F) of this rule. The weighted average ER for the indirect heating sources to be averaged shall be calculated by the following formula:

$$WAER = \frac{\sum_{i=1}^{n} (Er_i \times Q_i)}{\sum_{i=1}^{n} Q_i}$$

where
WAER = the weighted average ER in pounds per mmBtu;
ER_i = the actual ER of the ith indirect heating source in pounds per mmBtu;
Q_i = the rated heat input of the ith indirect heating source in mmBtu per hour; and
n = the number of indirect heating sources in the average.

2. Installations demonstrating compliance with this rule in accordance with the requirements of subsection (3)(G) of this rule shall do so by making written application to the director. The application shall include the calculations performed in paragraph (3)(G)1. of this rule and all necessary information relative to making this demonstration. After written approval by the director, the ER used in the calculations of paragraph (3)(G)1. of this rule ~~shall become the maximum allowable particulate~~ ER for each specified indirect heating source under this rule.

3. Subsection (3)(G) of this rule only shall apply--
   A. To indirect heating sources while burning coal; and

B. If the maximum allowable particulate ER determined in paragraph (3)(G)2. of this rule for each indirect heating source does not exceed the maximum allowable particulate ER determined for that source from subsection (3)(E) or (3)(F) of this rule using the rated heat input, Q_i, for the individual indirect heating source as if that individual indirect heating source was the only such source at the installation.

(4) Reporting and Recordkeeping. **All records must be kept on-site for a period of five (5) years and made available to the department upon request. The owner or operator shall maintain records of the following information for each year the unit is operated.**

(A) The identification of each affected unit and the name and address of the plant where the unit is located for each unit subject to this rule;

(B) The calendar date of the record;

(C) The emission rate in lbs per mmBtu for each unit on an annual basis for those units complying with the limit in subsection (3)(E) and (F) of this rule.

(D) The emission rate in lbs per mmBtu for each facility on an annual basis for those units complying with subsection (3)(G) of this rule.

(5) Test Methods. **The following hierarchy of methods shall be used to determine compliance with subsections (E) and (F) of this rule.**

(A) Continuous Emission Monitoring System (CEMS), or Compliance Assurance Monitoring (CAM) Plan;

(B) Stack tests;

(C) AP-42 (Environmental Protection Agency (EPA) *Compilation of Air Pollution Emission Factors*) or FIRE (Factor Information and Retrieval System);

(D) Other EPA documents;

(E) Sound engineering calculations; or

(F) **The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5). Any other method which is in accordance with good professional practice may be used with the consent of the staff director and EPA.**

Missouri
Department of
Natural Resources

Response to Comment(s)
On Rule in Development

Rule number: 10 CSR 10-6.405

Rule Title: Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating

Type of rulemaking: New Rule

Response to Comment from Robert Stumpf

Comment: Concerning your new proposed rule, does any of this have the possibility of being applied to individual homeowners who have one, two or more wood burning stoves, which are used for their primary source of heat?

Response: The proposed rule is a consolidation of existing regional rules (10 CSR 10-2.040, 3.060, 4.04, and 5.030) into a single, statewide rule. The rule applies installations in which fuel is burned for the primary purposes of producing steam, hot water, or hot air or other indirect heating of liquids, gasses, or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Indoor, wood-burning stoves are a method of direct heating and, therefore, are not included in this regulation.

Comment: Are there any rules or regulations that apply to wood burning stoves at the residential level?

Response: No state regulations exist to control emissions from residential, wood-burning stoves. The federal Clean Air Act does not regulate emissions from residential wood-burning stoves. The Missouri State Statutes Section 643.055 prohibits the state from promulgating rules and regulations that are stricter than the federal Clean Air Act. However, in 1988, the U.S. Environmental Protection Agency (EPA) implemented regulations that establish performance standards for new residential wood heaters (Subpart AAA of 40 CFR 60.531). While this has helped reduce emissions from residential wood stoves; older, existing stoves and fireplaces are exempt from this regulation. We are not aware of any city or county ordinances that would apply to wood-burning stoves in St. Charles.

Some are covered by existing state Rule for outdoor wood boilers

Comment: I would appreciate any suggestions that you might offer me to help regulate residential wood burning stoves in my subdivision. I am not too sure just what can be

done, but something needs to be done at the residential level, also. I was thinking in terms of allowing wood stove burning from 6 pm to 6 am in the evening and night and then and then have no burning from 6 am to 6 pm to allow people to work in their yards and also allowing our children to play outside after school without breathing in fine particle matter. In the more rural area where the house are spaced further apart there is no problem, but in a more metropolitan area where the houses are closer together, air quality becomes a primary concern.

Response: We are not aware of any existing city, county, or state regulations that would control emissions from residential, wood-burning stoves. EPA does have a website that discusses this issue: http://www.epa.gov/woodstoves/. If you are interested in working with local organizations to develop a solution, you might consider EPA's voluntary wood stove changeout campaign as a way to reduce the amount of air pollution from wood smoke in areas that qualify. St. Charles County has been designated as nonattainment for fine particulate matter (PM2.5), so this area may be a candidate for the campaign.

Response to Comments from The Boeing Company

Comment: Since the indirect heating rules are an applicable requirement for most Title V permittees, and because these permits require annual Compliance Certification, each permittee must compile and update facility-wide heat input capacity for all boilers and hot water heaters, and then determine that each unit meets the applicable particulate emission level. For facilities such as ours, which combust only natural gas and #2 fuel oil, unit particulate emissions are inherently so low that the particulate limits of this rule are always met. Based on AP-42 emission factors, we believe that it is numerically impossible for a unit combusting natural gas or #2 fuel oil to exceed the particulate limits in this rule. Only in case of a serious malfunction might a natural gas or #2 fuel oil combustor approach such a limit temporarily, in which case the Missouri opacity limits would be exceeded, and the boiler would taken off line for repair.

As a Title V permit streamlining measure, we suggest the following:

In section (1)(C), amend the draft as follows: "This rule shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070, or to indirect heating sources that combust only natural gas or #2 fuel oil."

In section (1)(B), eliminate the words "gas and fuel oil" from the list of example fuels.

Such a clean fuels exemption would eliminate V applicability of this rule for the vast majority of Title V permittees who inherently comply, and would eliminate the engineering time required for the facility to certify compliance and for the agencies to review such certifications and permit conditions.

For facilities that combust both solid fuels and natural gas or fuel oil, there is a question that requires more exploration, preferably by a stakeholder group of affected parties and department staff. The question is whether the heat input for exempt natural gas/fuel oil

units should be included in the calculation of Q, the installation's total heat input. As presently drafted in section (3)(D) and the existing regional rules, the heat input for units that are subject to New Source Performance Standards are included in the calculation of the installation total heat input, even though these NSPS units are exempted from the rule at (1)(C) for purposes of meeting unit particulate emission limits. Should exempt natural gas/fuel oil units be treated like NSPS units, or be excluded from the calculation of Q? There are serious logical inconsistencies in basing emission limits for individual units on the aggregate heat input of the entire installation, so there is a larger question of whether this aggregate heat input approach should be retained at all.

Response: The department appreciates Boeing's comments. As a result of comments received on this draft rule consolidation, the draft rule is being dropped at this time but may considered at some future date. The comments regarding the addition of exemptions for natural gas and #2 fuel oil is being added to the rule comment file and will be considered for inclusion the next time the indirect heating rules are opened for change.

Response to Comments from Kansas City Power & Light Company and the Empire District Electric Company

Comment: This proposed rule will have an impact on Kansas City Power & Light's (KCP&L) Montrose Station, a coal-fired electric generating station located in Henry County, which consists of three coal-fired units exhausting through two stacks. In the RIR the state contends that the change in the current rules to remove the averaging option will not affect any source in the state. The three units at Montrose show compliance with their particulate matter limit under the terms of a Compliance Assurance Monitoring (CAM) plan that was approved by the Missouri Department of Natural Resources (department) and incorporated into the state-issued Title V Operating Permit on September 29, 2006. The applicable requirement section of the CAM plan states, "Emission Limit: 0.20 Lb PM per MMBtu on a station-wide average basis, except during periods of startup, shutdown and malfunction per 40 CFR 60.8(c)." KCP&L has always believed based on 10 CSR 10-3.060, the indirect heating rule for the out-state area of Missouri, that the PM limit at Montrose was a station-wide average, and this was confirmed, in our opinion, when the above language was incorporated by the department into the Title V Operating permit.

KCP&L and Empire District Electric (EDE) believe that under the existing provisions of 3.060 one can certainly conclude, that the emission limit should be applied station-wide. Within the section of the regulations that establishes the heat input used to calculate the emission limit it is stated, "The total heat input of all fuel burning units at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted." Once the emission limit is established by inputting this aggregate heat input into the given equation the regulation states, "No person may cause, allow or permit the emission of particulate matter from existing installations in excess of that specified in the following schedule:" The use of the word installation at this point, as compared to units in establishing the heat input, is interpreted by KCP&L and EDE to mean that the limit is applied to the entire facility as a group and that therefore

compliance with the limit is established by an average of the emission rates of the affected units. This is, by the way, similar to how the PM limit at our two-unit facility in Kansas is done. Subsequent to the out-state regulation, the regulations that were adopted for the cities of Kansas City and St. Louis, specifically provided for averaging of units which gave further credence to our interpretation of the outstate rule.

KCP&L points out that until the issuance of our latest operating permit and the incorporation of KCP&L's CAM plan, the issue of how the limit applied had never come up. With the advent of the CAM rule we are required to show continuous compliance and under our CAM plan we installed continuous emission monitors for PM at each of our three units as indicators of compliance. These monitors are located in the exhaust duct of each unit and the monitoring data is relayed to a computer where software calculates individual average PM emission rates, as well as, a station-wide emission rate. Montrose has been sending these reports to the department since the first quarter of 2008, and each report has included a station-wide average report. Maintaining the limit on a station-wide average is critical to the operational flexibility of this installation.

KCP&L and EDE believe that establishing the emission limit on a station-wide average should have little if any affect on overall air quality. As the department states throughout the RIR they are aware of no units using a station-wide average, and if Montrose is the only one, those emissions will have no significant impact on the state. Montrose is located in an area that is in attainment with the PM standards and allowing station-wide averaging at that unit will not change the emissions that are already occurring. This proposed rule will only apply to older power plants, since any plant that has been modified, or any new unit that has been built since 1971, or 1979 in K.C. and St. Louis, will have a PM limit established by New Source Review or New Source Performance Standard regulations and the limit will be much lower that this state rule. As a result there is a very finite class of sources that this change will apply to. If the state is concerned about PM emissions in the more populated areas of the state it could treat them differently, as the proposed rule does in calculating the emission limits, but there is no basis to make this proposal more stringent for the out-state areas that are currently in compliance with the national ambient air quality standards.

The RIR states, "Only the existing St. Louis and Kansas City rules provide for an averaging option as an alternate method of establishing emission rates." We believe, because of the ambiguity in the interpretation of the various rules, that the outstate and Springfield rules arguably can make use of average emission rates as well. This is based on the promulgation of regulations for Kansas City and St. Louis, which specifically provided for emission rate averaging, subsequent to the outstate regulation. One can argue that this obviously was done to add clarity to the Kansas City and St. Louis rules in comparison to the original outstate rule.

KCP&L points out that the RIR states, "No eligible facilities are currently using the averaging method and we are not aware of any that have used it in the past." This is incorrect. There are facilities in Missouri, including at least KCP&L's Montrose Station, that are relying on emission rate averaging to maintain compliance. This interpretation

that the proposed rule "will have a minimal impact on potentially applicable sources" is grossly in error. Millions of dollars spent for emission controls to comply with a changed interpretation by the department of the availability of an emission rate average is a significant impact.

Response: The department appreciates Kansas City Power & Light and Empire Electric's comments. As a result of comments received on this draft rule consolidation, the draft rule is being dropped at this time but may considered at some future date. Therefore, the outstate and Springfield rules (3.060 and 4.040) will remain not allowing for averaging and the Kansas City and St. Louis rules will remain with stricter allowable emission rates than the outstate and Springfield rules. The department can work with Kansas City Power & Light to clarify and correct any inconsistencies between the outstate rule and their operating permit (and attached CAM plan).

Comment: The stated intention of this rule in the RIR is to "consolidate the existing area specific indirect heating regulations into a single rule for the entire state that is easier to read." Currently, there are four different rules in 10 CSR 10 (Chapter 2 – Kansas City, Chapter 3 – Outstate, Chapter 4 – Springfield and Chapter 5 – St. Louis). We question whether the proposed rule is meeting that objective. While the proposal is a single rule under 10 CSR 10-6.405, the various sections of the bill in affect establish four different rules within the body of the new regulation that are still different depending on the source location in the state. This seems to undermine the purpose of consolidating the rule.

KCP&L and EDE point out that the RIR states, "Removal of this option will be more protective of air quality by maintaining or reducing the potential particulate matter emissions in the St. Louis and Kansas City areas." But it later admits that "no scientific data was used to commence the rulemaking". Where is the basis for the statement that the proposed rule is "more protective of air quality" and "will benefit the environment"?

We would suggest that no rule change is necessary or in the alternative that a single rule similar to the current Kansas City or St. Louis rule is a better approach and should be applied throughout the state.

Response: The department appreciates Kansas City Power & Light and Empire District Electric Company's comments. As a result of comments received on this draft rule consolidation, the draft rule is being dropped at this time but may considered at some future date.

Comment: KCP&L states that the Kansas City and St. Louis rules include an alternative to allow station-wide averaging at the option of the facility after notifying the department. This allows for operational flexibility without any known detriment to air quality. This alternative method could be modified to allow for a continual averaging basis rather than establishing set rates for each unit in situations where the facility is able to show continuous compliance through monitoring or some other approved alternative. We are aware of no information or studies which would indicate that allowing application of the

limit on a station-wide average would in any way imperil air quality in the state, in fact there is every reason to believe that this would not increase emissions over current levels.

KCP&L and EDE believe that there is a fundamental problem to the logic used in the existing and proposed rules. All units' heat inputs aggregated to establish a limit to be applied to each individual source. The limit should be applied on a station-wide average basis if it is based on an aggregate heat input, or that option should at least be available. If the limit is to be applied to each individual unit then only the heat input from that unit should be used to establish the PM limit. To do otherwise is to force smaller units to meet a lower emission rate simply because they are co-located with other units. This defies the logic of current emission controls. Federal and state air regulations in the past have always recognized that controlling large units is more efficient and economical, and more easily accomplished than controlling small units. The implementation of this proposed rule turns that rational on its head and forces small units to control like large units just because they are located on a common site.

KCP&L states that some have argued that a station-wide average would be difficult to implement and enforce. We disagree and believe that with the requirement of CAM plans as part of our Title V Operating Permits the details of how a station-wide average is implemented can be worked out within that permitting process, and would be no more difficult to implement than many other aspects of CAM plans.

KCP&L and EDE believe that the proposed rule also would create problems at sites where a new unit is built under New Source Performance Standards (NSPS) rules at the same site as an existing facility. Under the rule the heat input of the new unit, which already would have an NSPS or Prevention of Significant Deterioration (PSD) limit likely far below the state rule, would be added to the existing units' heat input prior to calculating the emission limit for the facility. This would have the affect of forcing a lower PM limit on the existing unit even though there has been no change or modification to that unit. This could actually discourage the practice of adding new units to existing sites, and actually makes the Missouri rule more stringent than federal new source review regulations which would only require a lower limit upon a showing that the particular source had been modified.

We would also point out that the rule has not really clarified things. There is still no specific language in the proposed rule that states whether or not the limits established apply unit by unit or on a facility-wide basis. The language is still confusing since the heat input is established by aggregating the heat input of all affected units but the emission limit once calculated is applied using the following language, "No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following schedule:" The use of the word sources, plural, could be interpreted to mean that the limit applies to all sources as a group and thus as a station-wide average. Nowhere in the proposed rule does it specifically state that the emission limit is to be applied on a unit by unit basis once established.

Comments after 6/24 workgroup mtg.

10 CSR 10-6.405 Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating

(1) Applicability.

(A) This rule applies throughout the state with additional conditions applicable to the metropolitan areas of Kansas City, Springfield and St. Louis as found in sections 2, 4 and 5 **(remove 5 ????)** of this rule.

(B) This rule applies to installations in which fuel is burned for the primary purpose of producing steam, hot water or hot air or other indirect heating of liquids, gases or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels may include for example coal, coke, lignite, coke breeze, gas, fuel oil and wood but do not include refuse. When any products or byproducts of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

clarify language for 1(C) vs 3(D)

(C) This rule shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070 **???except as calculated in (3)(D) ?? or eliminate completely??? Or also exclude 6.075 & 6.080.**

(2) Definitions.

(A) Existing—Any source which was in being, installed or under construction on the date provided in the following table:

Area of State	Contruction date began on or before
Kansas City Metropolitan Area	February 15, 1979*
St. Louis Metropolitan Area	February 15, 1979*
Springfield-Greene County Area	September 24, 1971
Outstate Area	February 24, 1971

*Exception: If any source subsequently is altered, repaired or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing, but shall be considered as new.

(B) New—Any source which is not an existing source, as defined in subsection (2)(A) of this rule.

(C) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions. **(review test reqmts????) (use table to capture differences with one set of text?????)**

(A) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040(2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040(3) ???????.

(B) For purposes of this rule, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack(s). The **hourly** heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater, except in the case of boilers of ten (10) million British thermal units (Btu) or less the heat input can also be determined by the higher heating value (HHV) of the fuel used at maximum operating conditions. The total heat input of all fuel burning units used for indirect heating at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

(C) The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5). Any other method which is in accordance with good professional practice may be used with the consent of the staff director.

But will be used in the heat input aggregate of the calculation

(D) Indirect heat input values from sources that are subject to 10 CSR 10-6.070 New Source Performance Standards shall be used in the calculation of Q (the installation's total heat input). **Major Issue – include or not include??????**

(E) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission limitations than in this rule shall meet the requirements of 10 CSR 10-6.060 Construction Permits Required.

(F) Emission Limitations for Existing Indirect Heating Sources. **???Prefer averaging throughout state**

1. Kansas City and St. Louis Metropolitan Areas

A. No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following schedule:

(I) If the total equipment heat input has a capacity rating of less than ten (10) million Btu, 0.60 pounds for each million Btu per hour input; or **???Make units similar throughout**

(II) If the total equipment heat input has a capacity rating of greater than five thousand (5,000) million Btu per hour, 0.12 pounds per million Btu of heat input.

B. The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating equal to or greater than ten (10) million Btu per hour and less than or equal to five thousand (5,000) million Btu per hour shall be determined by the following equation:

$$E = 1.09(Q)^{-0.259}$$

where

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in millions of Btu per hour.

2. Springfield-Greene County and Outstate Areas.

A. No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following schedule:

(I) If the total equipment heat input has a capacity rating of ten (10) million Btu or less, 0.60 pounds for each million Btu per hour input; or

(II) If the total equipment heat input has a capacity rating of ten thousand (10,000) million Btu or more, 0.18 pounds for each million Btu per hour input.

B. The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating between ten (10) million and ten thousand (10,000) million Btu per hour shall be determined by use of the following equation:

$$E = 0.90(Q)^{-0.174}$$

where
E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in millions of Btu per hour.

(G) Emission Limitations for New Indirect Heating Sources.

1. Kansas City and St. Louis Metropolitan Areas

A. No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following schedule:

(I) If the total equipment heat input has a capacity of less than ten (10) million Btu, 0.40 pounds for each million Btu per hour of input, or

(II) If the total equipment heat input has a capacity rating greater than one thousand (1,000) million Btu, 0.10 pounds for each million Btu per hour input.

B. The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating equal to or greater than ten (10) million Btu per hour and less than or equal to one thousand (1,000) million Btu per hour shall be determined by the following equation:

$$E = 0.80(Q)^{-0.301}$$

where

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and

Q = the installation heat input in millions of Btu per hour.

From call 9/14/00
In spreadsheet: can use either 4 or 3
keeping col. G the same method - not limit
Changing ~~limit~~ method to meet the limits
Acid Rain Pag 76.11
allows avg among units
Does change in rule allow > SO2 increase in emissions?

2. Springfield-Greene County and Outstate Areas.

A. No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following schedule:

(I) If the total equipment heat input has a capacity rating of ten (10) million Btu or less, 0.60 pounds for each million Btu per hour input; or

(II) If the total equipment heat input has a capacity rating of two thousand (2,000) million Btu or more, 0.10 pounds for each million Btu per hour input.

B. The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating between ten (10) million and two thousand (2,000) million Btu per hour shall be determined by use of the following equation:

$$E = 1.31(Q)^{-0.338}$$

where

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and

Q = the installation heat input in millions of Btu per hour.

(4) Reporting and Recordkeeping. *(Not Applicable)*

???Use Title V permit requirements – ~~not grant work~~ if not in SIP then they will have to be in Title V

4 & 5 need to be in rule for purposes of consistency

(5) Test Methods. *(Not Applicable)*

maybe reference the other rules

need to reference; how would they ever know if no test methods before, ~~how~~

3.060, 4.090, 5.030

Missouri Department of Natural Resources

10 CSR 10-6.405 Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating

(1) Applicability.

(A) This rule applies throughout the state with additional conditions applicable to the metropolitan areas of Kansas City, Springfield and St. Louis as found in sections 2, 4 and 5 of this rule.

(B) This rule applies to installations in which fuel is burned for the primary purpose of producing steam, hot water or hot air or other indirect heating of liquids, gases or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels may include for example coal, coke, lignite, coke breeze, gas, fuel oil and wood but do not include refuse. When any products or byproducts of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

(C) This rule shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070. NSPS ??? will clarify and add other rules

(2) Definitions.

(A) Existing—Any source which was in being, installed or under construction on the date provided in the following table:

Area of State	Contruction date began on or before
Kansas City Metropolitan Area	February 15, 1979*
St. Louis Metropolitan Area	February 15, 1979*
Springfield-Greene County Area	September 24, 1971
Outstate Area	February 24, 1971

*Exception: If any source subsequently is altered, repaired or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing, but shall be considered as new.

(B) New—Any source which is not an existing source, as defined in subsection (2)(A) of this rule.

(C) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040(2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040(3).

Rulemaking restarted June 2008
Got to 60 day comment period

DRAFT

(B) For purposes of this rule, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack(s). The heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater, except in the case of boilers of ten (10) million British thermal units (Btu) or less the heat input can also be determined by the higher heating value (HHV) of the fuel used at maximum operating conditions. The total heat input of all fuel burning units used for indirect heating at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

(C) The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5). Any other method which is in accordance with good professional practice may be used with the consent of the staff director.

(D) Indirect heat input values from sources that are subject to 10 CSR 10-6.070 New Source Performance Standards shall be used in the calculation of Q (the installation's total heat input).

(E) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission limitations than in this rule shall meet the requirements of 10 CSR 10-6.060 Construction Permits Required.

(F) Emission Limitations for Existing Indirect Heating Sources.

1. Kansas City and St. Louis Metropolitan Areas

A. No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following schedule:

(I) If the total equipment heat input has a capacity rating of less than ten (10) million Btu, 0.60 pounds for each million Btu per hour input; or

(II) If the total equipment heat input has a capacity rating of greater than five thousand (5,000) million Btu per hour, 0.12 pounds per million Btu of heat input.

B. The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating equal to or greater than ten (10) million Btu per hour and less than or equal to five thousand (5,000) million Btu per hour shall be determined by the following equation:

$$E = 1.09(Q)^{-0.259}$$

where

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and

Q = the installation heat input in millions of Btu per hour.

2. Springfield-Greene County and Outstate Areas.

Diff. equations
• more people/more PM in St. Louis/KC area

A. No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following schedule:

(I) If the total equipment heat input has a capacity rating of ten (10) million Btu or less, 0.60 pounds for each million Btu per hour input; or

(II) If the total equipment heat input has a capacity rating of ten thousand (10,000) million Btu or more, 0.18 pounds for each million Btu per hour input.

why diff than Reg St.L.

B. The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating between ten (10) million and ten thousand (10,000) million Btu per hour shall be determined by use of the following equation:

$$E = 0.90(Q)^{-0.174}$$

where

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and

Q = the installation heat input in millions of Btu per hour.

(G) Emission Limitations for New Indirect Heating Sources.

1. Kansas City and St. Louis Metropolitan Areas

A. No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following schedule:

(I) If the total equipment heat input has a capacity of less than ten (10) million Btu, 0.40 pounds for each million Btu per hour of input, or

(II) If the total equipment heat input has a capacity rating greater than one thousand (1,000) million Btu, 0.10 pounds for each million Btu per hour input.

B. The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating equal to or greater than ten (10) million Btu per hour and less than or equal to one thousand (1,000) million Btu per hour shall be determined by the following equation:

$$E = 0.80(Q)^{-0.301}$$

where

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and

Q = the installation heat input in millions of Btu per hour.

2. Springfield-Greene County and Outstate Areas.

A. No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following schedule:

(I) If the total equipment heat input has a capacity rating of ten (10) million Btu or less, 0.60 pounds for each million Btu per hour input; or

(II) If the total equipment heat input has a capacity rating of two thousand (2,000) million Btu or more, 0.10 pounds for each million Btu per hour input.

B. The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating between ten (10) million and two thousand (2,000) million Btu per hour shall be determined by use of the following equation:

$$E = 1.31(Q)^{-0.338}$$

where

E = the maximum allowable particulate emission rate in pounds per million Btu of heat input, rounded off to two (2) decimal places; and

Q = the installation heat input in millions of Btu per hour.

(4) Reporting and Recordkeeping. *(Not Applicable)*

(5) Test Methods. *(Not Applicable)*

County and Outstate Missouri	≥2,000	0.10
	>10, and <2,000	$E=1.31Q^{-0.338}$

where
E = the maximum allowable particulate emission rate in pounds per mmBtu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in mmBtu per hour.

(G) Alternate Method of Compliance.

1. Compliance with this rule also may be demonstrated if the weighted average emission rate (ER) of two (2) or more indirect heating sources is less than or equal to the maximum allowable particulate ER determined in subsection (3)(E) or (3)(F) of this rule. The weighted average ER for the indirect heating sources to be averaged shall be calculated by the following formula:

has to be less than chart

$$WAER = \frac{\sum_{i=1}^{n} (Er_i \times Q_i)}{\sum_{i=1}^{n} Q_i}$$

* What are we comparing the weighted average to from the chart?

where
WAER = the weighted average ER in pounds per mmBtu;
ER_i = the actual ER of the ith indirect heating source in pounds per mmBtu;
Q_i = the rated heat input of the ith indirect heating source in mmBtu per hour; and
n = the number of indirect heating sources in the average.

2. Installations demonstrating compliance with this rule in accordance with the requirements of subsection (3)(G) of this rule shall do so by making written application to the director. The application shall include the calculations performed in paragraph (3)(G)1. of this rule and all necessary information relative to making this demonstration. After written approval by the director, the ER used in the calculations of paragraph (3)(G)1. of this rule shall become the maximum allowable particulate ER for each specified indirect heating source under this rule.
3. Subsection (3)(G) of this rule only shall apply--
   A. To indirect heating sources while burning coal; and

Response to comments will need to be changed

B. If the maximum allowable particulate ER determined in paragraph (3)(G)2. of this rule for each indirect heating source does not exceed the maximum allowable particulate ER determined for that source from subsection (3)(E) or (3)(F) of this rule using the rated heat input, Q_i, for the individual indirect heating source as if that individual indirect heating source was the only such source at the installation.

(4) Reporting and Recordkeeping.
The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5). Any other method which is in accordance with good professional practice may be used with the consent of the staff director. All records must be kept on-site for a period of five (5) years and made available to the department upon request.

(5) Test Methods. *(Not Applicable)*

(1)(C) - does not apply to indirect heating sources
(3)(C) - says you need to include heat input
suggest: however heat input must be ~~the input must~~ kept for purposes of calculating as outlined in (3)(C)
→ send to Aaron - language from Bob.

Bob
- Now excluding sources from the SIP, referring to NSPS
- If ~~apply~~ comply to 6.070, they comply to this rule.

Sources subject to

Comments:
1. For sources subject to 6.070, Compliance w/ 6.070 shall be deemed compliance w/ this rule.
2. However, 3(E), second part.
3. 3(C) can be deleted.
4. How can they say no backsliding for outstate/springfield area → averaging

Other state allow for state wide averaging
IA - doesn't allow
KS - don't think

5. explanation of 3(G)(1)
6. If already have permit that's more stringent than this rule, then sources will have to comply w/ permit. (in original rule; limits are 3(d))
7. Need to be clear about what they are asking to report/record → what type of records. → how often
8. Move first sentence in 4 to 5 and
- Remove second sentence

latest version 7/29 meeting 8/4

(1)

10 CSR 10-6.405 Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating

(1) Applicability.

(A) This rule applies throughout the state with additional conditions applicable to the metropolitan areas of Kansas City, Springfield and St. Louis as found in sections (2), and (3) of this rule.

(B) This rule applies to installations in which fuel is burned for the primary purpose of producing steam, hot water or hot air or other indirect heating of liquids, gases or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels may include for example coal, coke, lignite, coke breeze, gas, fuel oil and wood but do not include refuse. When any products or byproducts of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

(C) This rule shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070, except as calculated in subsection (3)(C) of this rule.

(2) Definitions.

(A) Existing—Any source which was in being, installed or under construction on the date provided in the following table:

Area of State	Contruction date began on or before
Kansas City Metropolitan Area	February 15, 1979*
St. Louis Metropolitan Area	February 15, 1979*
Springfield-Greene County Area	September 24, 1971
Outstate Area	February 24, 1971

*Exception: If any source subsequently is altered, repaired or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing, but shall be considered as new.

(B) New—Any source which is not an existing source, as defined in subsection (2)(A) of this rule.

(C) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040(2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040(3).

(B) For purposes of this rule, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack(s). The hourly heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater, except in the case of boilers of ten (10) million British thermal units (mmBtu) or less the heat input can also be determined by the higher heating value (HHV) of the fuel used at maximum operating conditions. The total heat input of all fuel burning units used for indirect heating at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

clarify language → (C) Indirect heat input values from sources that are subject to 10 CSR 10-6.070 New Source Performance Standards shall be used in the calculation of Q (the installation's total heat input).

→ as original Rule (D) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission limitations than in this rule shall meet the requirements of 10 CSR 10-6.060 Construction Permits Required.

(E) Emission Limitations for Existing Indirect Heating Sources. No person may cause, allow or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following table:

Area of State	Heat Input (mmBtu/hour)	Limits for Existing Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	<10	0.60
	>5,000	0.12
	≥10, and ≤5,000	$E=1.09Q^{-0.259}$
Springfield-Greene County and Outstate Missouri	≤10	0.60
	≥10,000	0.18
	>10, and <10,000	$E=0.90Q^{-0.174}$

where
E = the maximum allowable particulate emission rate in pounds per mmBtu of heat input, rounded off to two (2) decimal places; and
Q = the installation heat input in mmBtu per hour.

(F) Emission Limitations for New Indirect Heating Sources. No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following table:

Area of State	Heat Input (mmBtu/hour)	Limits for New Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	<10	0.40
	>1,000	0.10
	≥10, and ≤1,000	$E=0.80Q^{-0.301}$
Springfield-Greene	≤10	0.60

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

www.dnr.mo.gov

NOTICE OF MISSOURI AIR CONSERVATION COMMISSION MEETING

Missouri Air Conservation Commission Meeting

Elm Street Conference Center
1730 East Elm Street
Lower Level
Bennett Springs Conference Room
Jefferson City, MO 65101
June 24, 2010
9:00 a.m.

AGENDA

10 CSR 10-3.090 (rescission) Restriction of Emission of Odors	115
10 CSR 10-4.070 (rescission) Restriction of Emission of Odors	121
10 CSR 10-5.160 (rescission) Control of Odors in the Ambient Air	125

E. Recommended for Adoption and Actions to be Voted on

None.

F. New Business

Attorney General's Office Referrals (Approval Requested) — Paul Jeffery

Final Finish	131
Accurate Building Inspections	133
T.J. Metals	135

G. Unfinished Business

None.

H. Appeals and Variance Requests

None.

I. Open Session

This segment of the meeting affords citizens an opportunity to voice concerns to the commission on air quality issues. Please be advised, comments on specific rulemakings need to be provided as testimony, under oath, during the formal process of the public hearing for that rulemaking.

J. Future Meeting Dates (No Action Needed)

July 28, 2010 – (Wednesday) **Lake of the Ozarks**
Country Club Hotel and Spa
1-800-964-6698
Monte Carlo Room
250 Racquet Club Drive
Lake Ozark, MO 65049

August 26, 2010 – West Plains
Café 37
2nd Floor
37 Court Square
West Plains, MO 65775

September 30, 2010 –Kansas City
Holiday Inn Southeast
1-816-737-0200
Royal C and D
9103 East 39th Street
Kansas City, MO 64133

October 28, 2010 – Springfield
University Plaza
1-417-864-7333
Kansas A and B
333 John Q. Hammons Parkway
Springfield, MO 65806

December 2, 2010 – Jefferson City
Elm Street Conference Center
1730 East Elm Street
Lower Level
Bennett Springs Conference Room
Jefferson City, MO 65101

K. Discussion of Pending Litigation and Legal Matters — Tim Duggan

(This portion of the meeting may be closed, pursuant to Section 610.021 (1), RSMo, after a vote by the Commission.)

L. Meeting Adjournment — Kevin Rosenbohm

* *

Persons with disabilities requiring special services or accommodations to attend the meeting can make arrangements by calling the Air Pollution Control Program directly at (573) 751-4817, or by calling the division's toll-free number at 1-800-361-4827. Hearing impaired persons may contact the program through Relay Missouri, 1-800-735-2966. Please visit our web site at www.dnr.mo.gov.

JK

- Pb comment period - ends 8/16/2010

- Pb mont network: proposes to reduce sampling for pollutants that are not needed
  20% reduction sampling ≈ savings 340K → 400K

- not accepting delegation of MACT Authority
  commissioner: EPA does have resources - leaves local sources w/ dealing w/ EPA

- Funding: 11% decrease of funds coming dw ⇒ expects to get 1.2 mill from EPA
  $620K ↓ in air program state grants

- Gov signed state of emergency for flooding/storm damages

Odor Rule

- Scott White (CLEAN) - supports adoption, but needs more
  (x law student
  - all CAFOs should comply not just large ones
  - Fed thresholds lower than state for IA CAFOs
  - changes to def (may cause inconsistency) ie modification

- Roger Walker (Reg Form) - glad this is over, thinks resolution is workable.

- Robert Bruning (law firm) ⇒ MO Pork Assoc. ⇒ supports exemption for class 1B & 1C
  ⇒ inspector be trained/certified $ ~~~ sensitivity & naval rangers

- Garrett Hawkins: MO Farm Bureau proposal not perfect but compromise
  urges proposal to expand but just move forward

Call w/ Aaron Bashaan 6/22/20

Table to go along w/ Rule

2 ~~tables~~ tables: 1) show how Rule is now

2) shows changes

Same draft rule as before -.

Will not present @ meeting

- will touch on boiler MACT & Utility MACT that control PM
- Final due April 2010 = coming out in November

Differences:

Averaging & will do for KC/STL

comments want to do it for Springfield

Previously Proposed Consolidated Rule Summary Table

	Existing: total heat input of existing units only			"Q" obtained through Summation of all units or on a unit by unit basis	New: total heat input of new units			Averaging Allowed	≥30% altered considered new?	Existing unit Date (on or before)
Range in mmBtu/hr	<10	≥10, ≤5,000	>5,000		<10	≥10, ≤1,000	>1,000			
Kansas City & St. Louis limits	0.6	$1.09Q^{-0.259}$	0.12	**Unclear - Summation / unit by unit?**	0.04	$0.80Q^{-0.301}$	0.1	**No**	Yes	February 15, 1979
	Existing: total heat input of existing units only			"Q" obtained through Summation of all units or on a unit by unit basis	New: total heat input of new units*			Averaging Allowed	≥30% altered considered new?	Existing unit Date (on or before)
Range in mmBtu/hr	≤10	>10, <10,000	≥10,000		≤10	>10, <2,000	≥2,000			
Outstate & Springfield- Greene limits	0.6	$0.90Q^{-0.174}$	0.18	Unclear - Summation / unit by unit?	0.06	$1.31Q^{-0.338}$	0.1	No	No	September & February 24, 1971

Current Area Specific Rules Summary Table

	Existing: total heat input of existing units only			"Q" obtained through Summation of all units or on a unit by unit basis	New: total heat input of new units			Averaging Allowed	≥30% altered considered new?	Existing unit Date (on or before)
Range in mmBtu/hr	<10	≥10, ≤5,000	>5,000		<10	≥10, ≤1,000	>1,000			
Kansas City & St. Louis limits	0.6	$1.09Q^{-0.259}$	0.12	**Summation**	0.04	$0.80Q^{-0.301}$	0.1	**Yes**	Yes	February 15, 1979
	Existing: total heat input of existing units only			"Q" obtained through Summation of all units or on a unit by unit basis	New: total heat input of new units			Averaging Allowed	≥30% altered considered new?	Existing unit Date (on or before)
Range in mmBtu/hr	≤10	>10, <10,000	≥10,000		≤10	>10, <2,000	≥2,000			
Outstate & Springfield- Greene limits	0.6	$0.90Q^{-0.174}$	0.18	Unclear - Summation / unit by unit?	0.06	$1.31Q^{-0.338}$	0.1	No	No	September & February 24, 1971

* Shading represents areas of the rule(s) where significant changes were made from the Current Area specific rules to the Previously Proposed Consolidation

From call 9/8/20

+ 6.120. add language from this → record keeping

★ send language to reconcile 1(c) ?

+ (4) remove "director" (DNR) to look into it

+ - DNR

★ -

Aaron to send changes to Indirect Heating Rule

Previously Proposed Consolidated Rule Summary Table

	Existing: total heat input of existing units only			"Q" obtained through Summation of all units or on a unit by unit basis	New: total heat input of new units			Averaging Allowed	≥30% altered considered new?	Existing unit Date (on or before)
Range in mmBtu/hr	<10	≥10, ≤5,000	>5,000		<10	≥10, ≤1,000	>1,000			
Kansas City & St. Louis limits	0.6	$1.09Q^{-0.259}$	0.12	**Unclear - Summation / unit by unit?**	0.04	$0.80Q^{-0.301}$	0.1	**No**	Yes	February 15, 1979
	Existing: total heat input of existing units only			"Q" obtained through Summation of all units or on a unit by unit basis	New: total heat input of new units			Averaging Allowed	≥30% altered considered new?	Existing unit Date (on or before)
Range in mmBtu/hr	≤10	>10, <10,000	≥10,000		≤10	>10, <2,000	≥2,000			
Outstate & Springfield- Greene limits	0.6	$0.90Q^{-0.174}$	0.18	Unclear - Summation / unit by unit?	0.06	$1.31Q^{-0.338}$	0.1	No	No	September & February 24, 1971

Current Area Specific Rules Summary Table

	Existing: total heat input of existing units only			"Q" obtained through Summation of all units or on a unit by unit basis	New: total heat input of new units			Averaging Allowed	≥30% altered considered new?	Existing unit Date (on or before)
Range in mmBtu/hr	<10	≥10, ≤5,000	>5,000		<10	≥10, ≤1,000	>1,000			
Kansas City & St. Louis limits	0.6	$1.09Q^{-0.259}$	0.12	**Summation**	0.04	$0.80Q^{-0.301}$	0.1	**Yes**	Yes	February 15, 1979
	Existing: total heat input of existing units only			"Q" obtained through Summation of all units or on a unit by unit basis	New: total heat input of new units			Averaging Allowed	≥30% altered considered new?	Existing unit Date (on or before)
Range in mmBtu/hr	≤10	>10, <10,000	≥10,000		≤10	>10, <2,000	≥2,000			
Outstate & Springfield- Greene limits	0.6	$0.90Q^{-0.174}$	0.18	Unclear - Summation / unit by unit?	0.06	$1.31Q^{-0.338}$	0.1	No	No	September & February 24, 1971

* Shading represents areas of the rule(s) where changes were made from the Current Area specific rules to the Previously Proposed Consolidation

St. Louis Metro

10 CSR 10-5.030 Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

(1) General Provisions.

(A) This rule applies to installations which have indirect heating sources.

(B) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040, section (2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040, section (3).

(C) The heat input used for each indirect heating source shall be the equipment manufacturer's or designer's guaranteed maximum input in millions of BTU's per hour, whichever is greater.

(D) The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030, section (5).

(E) For the purpose of this rule only, the following terms shall have the meaning ascribed below:

1. Existing—means any source which was in being, installed or under construction on February 15, 1979, except that if any source is subsequently altered, repaired or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing, but shall be considered as new; and

2. New—means any source which is not an existing source, as defined in paragraph (1)(E)1.

(F) This regulation shall not apply to indirect heating sources subject to the provisions of 10 CSR 10-6.070.

(G) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission limitations than in this rule, shall meet the requirements of 10 CSR 10-6.060, Permits Required.

(2) Maximum Allowable Particulate Emission Rate from Existing Indirect Heating Sources.

(A) The total heat input of all existing indirect heating sources within an installation shall be used to determine the

maximum allowable particulate emission rate, which is to be applied to each existing indirect heating source within the installation. Thereafter, each indirect heating source within the installation shall be tested and considered independently for compliance with this rule.

(B) Emission Limitations.

1. The maximum allowable particulate emission rate for an installation of existing indirect heating sources with a heat input rate of less than 10 million BTU per hour shall be 0.60 pounds per million BTU of heat input.

2. The maximum allowable particulate emission rate for an installation of existing indirect heating sources with a heat input rate equal to or greater than ten (10) million BTU per hour and less than or equal to five thousand (5000) million BTU per hour shall be determined by the following equation:

$$E = 1.09(Q)^{-0.259}$$

where
E = the maximum allowable particulate emission rate in pounds per million BTU of heat input, rounded off to two (2) decimal places, and

Q = the installation heat input in millions of BTU per hour.

3. The maximum allowable particulate emission rate for an installation of existing indirect heating sources with a heat input rate greater than 5,000 million BTU per hour shall be 0.12 pounds per million BTU of heat input.

(3) Maximum Allowable Particulate Emission Rate from New Indirect Heating Sources.

(A) The total heat input of all new and existing indirect heating sources within an installation shall be used to determine the maximum allowable particulate emission rate, which is to be applied to each new indirect heating source within the installation. The maximum allowable particulate emission rate from the existing indirect heating sources within such installation shall be determined as specified by 10 CSR 10-5.030, section (2). Thereafter, each indirect heating source within the installation shall be tested and considered independently for compliance with this rule.

(B) Emission Limitations.

1. The maximum allowable particulate emission rate for new sources in an installation of indirect heating sources with a heat input rate of less than 10 million BTU per hour shall be 0.40 pounds per million BTU of heat input.

2. The maximum allowable particulate emission rate for new sources in an installation of indirect heating sources with a heat input rate equal to or greater than ten (10) million BTU per hour and less than or equal to one thousand (1000) million BTU per hour shall be determined by the following equation:

$$E = 0.80(Q)^{-0.301}$$

where
E = the maximum allowable particulate emission rate in pounds per million BTU of heat input, rounded off to two (2) decimal places, and

Q = the installation heat input in millions of BTU per hour.

3. The maximum allowable particulate emission rate for new sources in an installation of indirect heating sources with a heat input rate greater than 1,000 million BTU per hour shall be 0.10 pounds per million BTU of heat input.

(4) Compliance with this rule shall be accomplished by any installation as expeditiously as practicable, but in no case shall final compliance extend beyond three (3) years from the effective date of this rule. In the interim each installation shall meet the allowable particulate emission rate applicable to the installation on October 25, 1978.

(5) Alternate Method of Compliance.

(A) Compliance with this rule may also be demonstrated if the weighted average emission rate of two (2) or more indirect heating sources is less than or equal to the maximum allowable particulate emission rate determined in section (2) or (3).

1. The weighted average emission rate for the indirect heating sources to be averaged shall be calculated by the following formula:

$$WAER = \frac{\sum_{i=1}^{n} (ER_i \cdot Q_i)}{\sum_{i=1}^{n} Q_i}$$

where
WAER = the weighted average emission rate in pounds per million BTU's.
ER_i = the actual emission rate of the i^{th} indirect heating source in pounds per million BTU's.
Q_i = the rated heat input of the i^{th} indirect heating source in millions of BTU's per hour.
n = the number of indirect heating sources in the average.

(B) Installations demonstrating compliance with this rule in accordance with the requirements of section (5) shall do so by making written application to the director. Such application shall include the calculations performed in paragraph (5)(A)1. and all necessary information relative to making this demonstration. After written approval by the director, the emission rates (ER) used in the calculations of paragraph (5)(A)1. shall become the maximum allowable particulate emission rates for each specified indirect heating source under this rule.

(C) Section (5) shall only apply—

1. To indirect heating sources while burning coal; and

2. If the maximum allowable particulate emission rate determined in subsection (5)(B) for each indirect heating source does not exceed the maximum allowable particulate emission rate determined for that source from section (2) or (3) using the rated heat input, Q_i, for that individual indirect heating source as if that individual indirect heating source was the only such source at the installation.

CFR: 40 C.F.R. 52.1320(c)(48)

FRM: 50 FR 3337 (1/24/85)

PRM: None

State Submission: 9/24/84

State Proposal: 9 MR 565 (4/2/84)

State Final: 9 MR 1372 (9/4/84)

APDB File: MO-56

Description: The EPA approved a revision to the regulation which streamlined all of the fuel-burning rules in the state by eliminating illustrative graphs and tables and by converting the equation to exponential form.

CFR: 40 C.F.R. 52.1320(c)(16)(v)

FRM: 45 FR 24140 (4/9/80) and 45 FR 46806 (7/11/80) (correction)

PRM: 44 FR 61384 (10/25/79)

State Submission: 6/29/79

State Proposal: 3 MR 583 (9/1/78)

State Final: 4 MR 119 (2/1/79)

APDB File: MO-01

Description: The EPA approved a new version of the regulation as part of the Part D SIP for the St. Louis TSP nonattainment area.

CFR: 40 C.F.R. 52.1320(c)(i)

FRM: 45 FR 17145 (3/18/80)

PRM: 44 FR 52001 (9/6/79)

State Submission: 8/28/78

State Proposal: Unknown

State Final: Unknown

APDB File: MO-03

Description: The EPA approved the recodification of the rule from Regulation II (St. Louis Metropolitan Area) to 10 C.S.R. 10-5.030.

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10 CSR 10-5.030

CFR: 40 C.F.R. 52.1320(a)(2)

FRM: 37 FR 10842 (5/31/72)

PRM: None

State Submission: 1/24/72

State Proposal: Unknown

State Final: (effective 3/24/67; revised 9/18/70)

APDB File: MO-00

Description: The EPA approved Regulation II (St. Louis Metropolitan Area) as part of the original SIP submission for controlling particulate matter emissions from fuel-burning equipment used for indirect heating.

Difference Between the State and EPA-Approved Regulation

The rule is identical to the state's rule except for a minor difference in internal numbering in section (5)(A).

Intent: consolidate but not change Rule

KCPL - Dan
CPC
St. Louis Co
Empire Electric
Boeing
Ann. Bussa
Roger Walker

Agenda
Indirect Heating Rules Workgroup
Roaring River Conference Room
Thursday, June 24, 2010
1:00 – 2:00 pm

* in new Rule

I. Current rulemaking development background.
II. Summary of comments received.
   A. Averaging of units. - removed from KC & St. Louis
   B. New Source Performance Standards (NSPS). - left as is....
   C. Nameplate capacity included in "Q".
III. Follow-on Actions.
   A. Proceed with rulemaking as originally drafted.
   B. Proceed with rule amendment as originally drafted but include additional changes.
   C. Drop rule action (leave area specific rules as currently written).

Averaging

1. Previously in KC/St. Louis Rule ⇒ removed in draft text rule
2. Boeing: 1 outstate area is relying on averaging, if not will be out of compliance
3. KCPL prefer to have avg for all areas - non NSPS would not meet SIP reg. w/out averaging
   Outstate area - title V permit states must add each unit
4. If you average, you have to do summation
5. KDHE allows averaging

Avg
multi units ⇒ combined heat inputs ⇒ come up w/ limit facility wide

- Backsliding??

If you don't include NSPS in average? If so, can they submit a demonstration

Any other NESHAPS

We believe that the proposed rule is not necessary or in the alternative can be improved and we would be willing to work with the state on developing a formal proposed rule that better meets the objectives set out in this procedure. A stakeholder process to review this proposal and recommend changes should be considered.

Response: The department appreciates Kansas City Power & Light and Empire District Electric Company's comments. As a result of comments received on this draft rule consolidation, the draft rule is being dropped at this time but may considered at some future date. The suggestions for retaining and clarifying the averaging option and an additional alternative method of compliance through monitoring are being added to the rule comment file and will be considered the next time the indirect heating rules are opened for change.

Response to Comments from AmerenUE

Comment: AmerenUE's first concern is that the averaging option that was contained in both 10 CSR 10-5.040 and 10 CSR 10-2.040 has been removed from the proposed rule. While AmerenUE currently is not using this option AmerenUE believes that the inclusion of an averaging plan allows for needed flexibility and still assures that emission levels will not increase and air quality will not be adversely affected. AmerenUE proposes that the following averaging option be included in 10 CSR 10-6.405.

Alternative Method of compliance:
Compliance with this rule may be demonstrated if the weighted Average Particulate Emission Rate (ER_a) of two (2) or more indirect heating sources is less than or equal to weighted Maximum Allowable Particulate Emission Rate (ER_m).

1) The weighted Average Particulate Emission Rate for indirect heating sources shall be calculated by the following formula:

$$ER_a = \frac{\sum_{i=1}^{n} (ER_{ai} * Q_{ai})}{\sum_{i=1}^{n} Q_{ai}}$$

Where:

ER_a = weighted Average Particulate Emission Rate for period specified (suggest monthly)

Q_{ai} = actual heat input of the i^{th} indirect heating source in millions of BTUs consumed for period specified (suggest monthly)

ER_{ai} = actual emission rate of the i^{th} indirect heating source in pounds per million BTUs for period specified (suggest monthly)

2) The weighted Maximum Allowable Particulate Emission Rate for indirect heating sources shall be calculated by the following formula:

$$ER_m = \frac{\sum_{i=1}^{n} (ER_{mi} * Q_{mi})}{\sum_{i=1}^{n} Q_{mi}}$$

Where:
ER_m = weighted Maximum Particulate Emission Rate for period specified (suggest monthly)

Q_{ai} = actual heat input of the i^{th} indirect heating source in millions of BTUs consumed for period specified (suggest monthly)

ER_{mi} = the emission rate of the i^{th} indirect heating source in pounds per million BTUs as calculated in section 3(F) and 3(G) in proposed 10 CSR 10-6.405.

If averaging is allowed in this way emissions can never be more (and generally would be less) than would occur if each individual unit was to meet the calculated limits in sections 3(F) or 3(G). This option gives the operator the option to control units where it makes economic sense while still meeting the total emission limitation of all units contained in the averaging plan.

Response: The department appreciates AmerenUE's comments. As a result of comments received on this draft rule consolidation, the draft rule is being dropped at this time but may considered at some future date. The suggestion for retaining the averaging option for the Kansas City and St. Louis areas is being added to the rule comment file and will be considered the next time the indirect heating rules are opened for change.

Response to Comments on from REGFORM

Comment: To be perfectly clear and direct, our principal comment is that this proposed rule should NOT go forward until we have an opportunity to further discuss in a Work Group setting the rationale for the rule, Air Pollution Control Program goals, and the specific impacts this rule will have on the regulated community.

It has become clear during this comment period that the proposed rule would benefit from additional dialogue with affected business and industry. We have heard from several REGFORM members (some of whom will likely comment independently) that there are

nuances and complexities that should be further discussed in a setting that pulls together all of the potential sources. Moreover, it is not clear that we have identified all of the potential impacts of this rule.

We would like a work group established as expeditiously as possible to further explore and understand the goals of the Department, the full impact on the regulated community, whether or not there are better approaches and word-smithing, and if appropriate, the efficacy of the rule itself.

Response: The department appreciates REGFORM's comments. As a result of comments received on this draft rule consolidation, the draft rule is being dropped at this time but may considered at some future date. If a rulemaking is considered at some future date for the indirect heating rules, the department will consider assembling a workgroup for that effort.

Response to comments from AmerenUE, The Boeing Company, Empire District Electric Company, and Kansas City Power & Light Company.

Comment: Under the proposed language in section (2)(A) of 10 CSR 10-6.405, an existing source if altered such that the rebuilt cost exceeds 30% of the replacement cost would be considered as a new source. The support for this rule offers no rationale or discussion in support of this 30% requirement. This is inconsistent with the federal and state New Source Performance Standards (NSPS) requirement of 50%, thus making this rule more stringent than the federal rule. If not removed it should at least be made consistent with the applicable federal rules.

Response: As a result of comments received on this draft rule consolidation, the draft rule is being dropped at this time but may considered at some future date. The comments regarding the 30% replacement requirement are being added to the rule comment file and will be considered the next time the indirect heating rules are opened for change.

Call w/ DHR: Aaron Basheer

Averaging: D can be used to determine if they are meeting the permit

2) If new, avg can be used to determine if new construction permit is needed.

NSPS: Comments: don't want them subject to rule = DHR will push for that to stay.

30% = stringency is set by the state.
50% for federal rule: State doesn't have to follow 50% for fed. Rule

Nameplate:

Did
Existing Rule include 10-6.070?? Yes.

Strategies to proceed: 1) w/ Rulemaking as is:
2) proceed w/ changes
3) drop rulemaking and leave rules as is

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 2—Air Quality Standards and Air Pollution Control Rules Specific to the Kansas City Metropolitan Area

PROPOSED RESCISSION

10 CSR 10-2.040 Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating. This rule restricted the emission of particulate matter from fuel burning equipment used for indirect heating in the Kansas City metropolitan area. This rulemaking will remove a rule that is being replaced with a new statewide rule that restricts the emission of particulate matter from fuel burning equipment used for indirect heating. If the commission adopts this rule action, it will be the department's intention to submit this rule rescission to the U.S. Environmental Protection Agency for removal from the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

PURPOSE: This rule restricted the emission of particulate matter from fuel burning equipment used for indirect heating. This rulemaking will remove a rule that is being replaced with a new statewide rule that restricts the emission of particulate matter from fuel burning equipment used for indirect heating. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, is a necessity evidence memorandum dated March 5, 2008.

AUTHORITY: section 203.050, RSMo 1986. Original rule filed Dec. 26, 1968, effective Jan. 5, 1969. Amended: Filed March 2, 1972, effective March 12, 1972. Rescinded and readopted: Filed Aug. 11, 1978, effective Feb. 11, 1979. Amended: Filed March 14, 1984, effective Sept. 14, 1984. Rescinded: Filed Feb. 25, 2011.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed rescission will begin at 9:00 a.m., May 26, 2011. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., June 2, 2011. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 3—Air Pollution Control Rules Specific to the Outstate Missouri Area

PROPOSED RESCISSION

10 CSR 10-3.060 Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating. This rule restricted the emission of particulate matter from fuel burning equipment used for indirect heating in the outstate Missouri area. This rulemaking will remove a rule that is being replaced with a new statewide rule that restricts the emission of particulate matter from fuel burning equipment used for indirect heating. If the commission adopts this rule action, it will be the department's intention to submit this rule rescission to the U.S. Environmental Protection Agency for removal from the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

PURPOSE: This rule restricted the emission of particulate matter from fuel burning equipment used for indirect heating. This rulemaking will remove a rule that is being replaced with a new statewide rule that restricts the emission of particulate matter from fuel burning equipment used for indirect heating. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, is a necessity evidence memorandum dated March 5, 2008.

AUTHORITY: section 643.050, RSMo 1986. Original rule filed March 24, 1971, effective April 3, 1971. For intervening history, please consult the ***Code of State Regulations****. Rescinded: Filed Feb. 25, 2011.*

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed rescission will begin at 9:00 a.m., May 26, 2011. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., June 2, 2011. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 4—Air Quality Standards and Air Pollution Control Regulations for the Springfield-Greene County Area

PROPOSED RESCISSION

10 CSR 10-4.040 Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating. This rule restricted the emission of particulate matter from fuel burning equipment used for indirect heating in the Springfield-Greene County area. This rulemaking will remove a rule that is being replaced with a new statewide rule that restricts the emission of particulate matter from fuel burning equipment used for indirect heating. If the commission adopts this rule action, it will be the department's intention to submit this rule rescission to the U.S.

Environmental Protection Agency for removal from the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

PURPOSE: This rule restricted the emission of particulate matter from fuel burning equipment used for indirect heating. This rulemaking will remove a rule that is being replaced with a new statewide rule that restricts the emission of particulate matter from fuel burning equipment used for indirect heating. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, is a necessity evidence memorandum dated March 5, 2008.

AUTHORITY: section 643.050, RSMo 2000. Original rule filed Dec. 5, 1969, effective Dec. 15, 1969. For intervening history, please consult the ***Code of State Regulations****. Rescinded: Filed Feb. 25, 2011.*

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed rescission will begin at 9:00 a.m., May 26, 2011. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., June 2, 2011. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 5—Air Quality Standards and Air Pollution Control Rules Specific to the St. Louis Metropolitan Area

PROPOSED RESCISSION

10 CSR 10-5.030 Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating. This rule restricted the emission of particulate matter from fuel burning equipment used for indirect heating in the St. Louis metropolitan area. This rulemaking will remove a rule that is being replaced with a new statewide rule that restricts the emission of particulate matter from fuel burning equipment used for indirect heating. If the commission adopts this rule action, it will be the department's intention to submit this rule rescission to the U.S. Environmental Protection Agency for removal from the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

PURPOSE: This rule restricted the emission of particulate matter from fuel burning equipment used for indirect heating. This rulemaking will remove a rule that is being replaced with a new statewide rule that restricts the emission of particulate matter from fuel burning equipment used for indirect heating. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, is a necessity memorandum dated March 5, 2008.

AUTHORITY: section 643.050, RSMo 1994. Original rule filed March 14, 1967, effective March 24, 1967. Rescinded and readopted: Filed Aug. 11, 1978, effective Feb. 11, 1979. Amended: Filed March 14, 1984, effective Sept. 14, 1984. Rescinded: Filed Feb. 25, 2011.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed rescission will begin at 9:00 a.m., May 26, 2011. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., June 2, 2011. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling and Reference Methods and Air Pollution Control Regulations for the Entire State of Missouri

PROPOSED RULE

10 CSR 10-6.405 Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used For Indirect Heating. If the commission adopts this rule action, it will be the department's intention to submit this new rule to the U.S. Environmental Protection Agency for inclusion in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

PURPOSE: This rule restricts the emission of particulate matter from fuel burning equipment used for indirect heating except where 10 CSR 10-6.070 would be applied. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, is a necessity evidence memorandum dated March 5, 2008.

(1) Applicability.

(A) This rule applies throughout the state with additional conditions applicable to the metropolitan areas of Kansas City, Springfield, and St. Louis as found in sections (2) and (3) of this rule.

(B) This rule applies to installations in which fuel is burned for the

primary purpose of producing steam, hot water, or hot air or other indirect heating of liquids, gases, or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels may include but are not limited to coal, tire derived fuel unless more strict standards apply, coke, lignite, coke breeze, gas, fuel oil, and wood but do not include refuse. When any products or byproducts of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission rate limitations shall apply.

(C) An emission unit's compliance with 10 CSR 10-6.070 or an emission unit fueled by landfill gas, propane, natural gas, and/or fuel oils #2 through #6; with less than one and two-tenths percent (1.2 %) sulfur would be deemed in compliance with 10 CSR 10-6.405, however the heat input from such emission unit must be included in the calculation of Q, the installation's total heat input as defined in subsections (3)(D) and (3)(E) of this rule.

(D) An installation is exempt from this rule if all of the installation's applicable units are fueled only by landfill gas, propane, natural gas, and fuel oils #2 through #6; with less than one and two-tenths percent (1.2 %) sulfur, or any combination of these fuels.

(2) Definitions.

(A) Existing—Any source which was in being, installed, or under construction on the date provided in the following table:

Area of State	Contruction date began on or before
Kansas City Metropolitan Area	February 15, 1979*
St. Louis Metropolitan Area	February 15, 1979*
Springfield-Greene County Area	September 24, 1971
Outstate Area	February 24, 1971

*Exception: If any source subsequently is altered, repaired, or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing, but shall be considered as new.

(B) New—Any source which is not an existing source, as defined in subsection (2)(A) of this rule.

(C) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions.

(A) The heat content of solid fuels shall be determined as specified in 10 CSR 10-6.040(2). The heat content of liquid hydrocarbon fuels shall be determined as specified in 10 CSR 10-6.040(3).

(B) For purposes of this rule, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack(s). The hourly heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater, except in the case of boilers of ten (10) million British thermal units (mmBtu) or less the heat input can also be determined by the higher heating value (HHV) of the fuel used at maximum operating conditions. The total heat input of all fuel burning units used for indirect heating at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

(C) Indirect heating sources requiring permits under 10 CSR 10-6.060 that in turn may require particular air pollution control measures to meet more stringent emission rate limitations than in this rule shall meet the requirements of the permits issued under 10 CSR 10-6.060 Construction Permits Required.

(D) Emission Rate Limitations for Existing Indirect Heating Sources. No person may cause, allow, or permit the emission of particulate matter from existing indirect heating sources in excess of that specified in the following table:

Area of State	Heat Input (mmBtu/hour)	Rate Limits for Existing Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	< 10	0.60
	> 5,000	0.12
	≥ 10 and ≤ 5,000	$E=1.09Q^{-0.259}$
Springfield-Greene County & Outstate Missouri	≤ 10	0.60
	≥ 10,000	0.18
	> 10 and < 10,000	$E=0.90Q^{-0.174}$

Where:
E = the maximum allowable particulate emission rate limit for existing sources in pounds per mmBtu of heat input, rounded off to two (2) decimal places; and
Q = the installation's existing sources heat input in mmBtu per hour.

(E) Emission Rate Limitations for New Indirect Heating Sources. No person may cause, allow, or permit the emission of particulate matter in excess of that specified in the following table:

Area of State	Heat Input (mmBtu/hour)	Rate Limits for New Sources (pounds/mmBtu)
Kansas City & St. Louis Metropolitan	< 10	0.40
	> 1,000	0.10
	≥ 10 and ≤ 1,000	$E=0.80Q^{-0.301}$
Springfield-Greene County & Outstate Missouri	≤ 10	0.60
	≥ 2,000	0.10
	> 10 and < 2,000	$E=1.31Q^{-0.338}$

Where:
E = the maximum allowable particulate emission rate limit for new sources in pounds per mmBtu of heat input, rounded off to two (2) decimal places; and
Q = the installation's new sources heat input in mmBtu per hour.

(F) Alternate Method of Compliance.

1. Compliance with this rule also may be demonstrated if the weighted average emission rate (WAER) of two (2) or more indirect heating sources is less than or equal to the maximum allowable particulate E determined in subsection (3)(D) or (3)(E) of this rule. The WAER for the indirect heating sources to be averaged shall be calculated by the following formula:

$$WAER = \frac{\sum_{i=1}^{n} (Ea_i \times Q_i)}{\sum_{i=1}^{n} Q_i}$$

Where:
WAER = the weighted average emission rate in pounds per mmBtu;
Ea_i = the actual emission rate of the ith indirect heating source in pounds per mmBtu;
Q_i = the rated heat input of the ith indirect heating source in mmBtu per hour; and
n = the number of indirect heating sources in the average.

2. Installations demonstrating compliance with this rule in accordance with the requirements of subsection (3)(F) of this rule shall do so by making written application to the director. The application shall include the calculations performed in paragraph (3)(F)1.

of this rule and all necessary information relative to making this demonstration.

3. Subsection (3)(F) of this rule only shall apply if the WAER determined by paragraph (3)(F)2. of this rule for indirect heating sources does not exceed the maximum allowable particulate E determined for that source from subsection (3)(D) or (3)(E) of this rule when using the rated heat input, Q_i, for the individual indirect heating source as if that individual indirect heating source was the only such source at the installation.

(4) Reporting and Record Keeping. All records must be kept on-site for a period of five (5) years and made available to the department upon request. The owner or operator shall maintain records of the following information for each year the unit is operated:

(A) The identification of each affected unit and the name and address of the plant where the unit is located for each unit subject to this rule;

(B) The calendar date of the record;

(C) The emission rate in pounds per mmBtu for each unit on an annual basis for those units complying with the limit in subsections (3)(D) and (3)(E) of this rule; and

(D) The emission rate in pounds per mmBtu for each facility on an annual basis for those units complying with subsection (3)(F) of this rule.

(5) Test Methods. The following hierarchy of methods shall be used to determine compliance with subsections (3)(D) and (3)(E) of this rule:

(A) Continuous Emission Monitoring System (CEMS);

(B) Stack tests;

(C) AP-42 (Environmental Protection Agency (EPA) *Compilation of Air Pollution Emission Factors*) or FIRE (Factor Information and Retrieval System);

(D) Other EPA documents;

(E) Compliance Assurance Monitoring (CAM) Plans as found in a facility operating permit may be used to provide a reasonable assurance of compliance with subsections (3)(D) and (3)(E) of this rule;

(F) Sound engineering calculations; or

(G) The amount of particulate matter emitted shall be determined as specified in 10 CSR 10-6.030(5). Any other method approved for the source incorporated into a construction or operating permit, settlement agreement, or other federally enforceable document.

AUTHORITY: section 643.050, RSMo 2000. Original rule filed Feb. 25, 2011.

PUBLIC COST: This proposed rule will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed rule will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed rule will begin at 9:00 a.m., May 26, 2011. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., June 2, 2011. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

Title 11—DEPARTMENT OF PUBLIC SAFETY
Division 45—Missouri Gaming Commission
Chapter 4—Licenses

PROPOSED AMENDMENT

11 CSR 45-4.030 Application for Class A or Class B License. The commission is amending section (20).

PURPOSE: This amendment clarifies an applicant's responsibility to keep its application current.

(20) The applicant *[or licensee]* shall be responsible to keep the application current at all times. The applicant *[or licensee]* shall notify the commission in writing within ten (10) days of any changes to any response in the application and this responsibility shall continue throughout any period *[of licensure granted]* **during which an application is being considered** by the commission. All updates to applications must be submitted by exhibit so that each affected exhibit is resubmitted with the updated information and with the date of resubmission. If any application update is not made in this manner, the commission may deem the update not to be effective.

AUTHORITY: sections 313.004(1) and 313.807, RSMo 2000, and section 313.805, RSMo Supp. 2010. Emergency rule filed Sept. 1, 1993, effective Sept. 20, 1993, expired Jan. 17, 1994. Emergency rule filed Jan. 5, 1994, effective Jan. 18, 1994, expired Jan. 30, 1994. Original rule filed Sept. 1, 1993, effective Jan. 31, 1994. For intervening history, please consult the Code of State Regulations. Amended: Filed Feb. 23, 2011.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost any private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Missouri Gaming Commission, PO Box 1847, Jefferson City, MO 65102. To be considered, comments must be received within thirty (30) days after publication of this notice in the Missouri Register. A public hearing is scheduled for May 18, 2011, at 10:00 a.m., in the Missouri Gaming Commission's Hearing Room, 3417 Knipp Drive, Jefferson City, Missouri.

Title 11—DEPARTMENT OF PUBLIC SAFETY
Division 45—Missouri Gaming Commission
Chapter 10—Licensee's Responsibilities

PROPOSED AMENDMENT

11 CSR 45-10.020 Licensee's and Applicant's Duty to Disclose Changes in Information. The commission is amending section (1).

PURPOSE: This amendment clarifies an applicant's and licensee's duty to disclose changes in information.

(1) All licensees and applicants for Class A, Class B, supplier, key person/key person business entity or Level I occupational licenses issued by the commission shall have a continuing duty to disclose in writing, within **ten (10) calendar days for an applicant and** thirty (30) calendar days **for a licensee**, any material change in the information provided in the application forms and requested materials submitted to the commission. Any change in information that is not

Follow-up To Call - MOVES vs MOBILE6

Steven Brown to: Kendra Sagoff, Lachala Kemp, Michael Jay, Michael Leslie, Robert Patrick, Edward Doty, Michael Compher, Jay Bortzer

06/17/2010 10:00 AM

History: This message has been forwarded.

Conference Call Follow-up:

*** Ozone Maintenance Plan-**
Illinois and Missouri could use different mobile models to create a budget for each side of the area. However, since the mobile portions of the Maint. Plans are in the final stages and for consistency reasons, they used the same mobile model (Mobile 6.2).

*** Conformity and Creation of a New Budget-**
Both Missouri and Illinois acknowledge the end of the grace period (2012) for using MOVES in Conformity and the requirements of the use of MOVES when creating a new budget during the SIP process.

Below are a few things to keep in mind:

States are not required to revise SIPs or existing budgets.-(this is my interpretation)
Federal Register Notice:
EPA also recognizes the time and effort that States have already undertaken in SIP development using MOBILE6.2. SIPs that EPA has already approved are not required to be revised solely based on existence of the new model. States that have already submitted SIPs or will submit SIPs shortly after EPA's approval of MOVES2010 are not required to revise these SIPs simply because a new motor vehicle emissions model is now available. States can choose to use MOVES2010 in these SIPs, for example, if it is determined that it is appropriate to update motor vehicle emissions budgets ("budgets") with the MOVES2010 model for future conformity determinations.

Once an area switches to MOVES it can not go back.-(this is my interpretation)
Federal Register Notice:
The grace period will be shorter than two years for a given pollutant if an area revises its SIP and budgets with MOVES2010, and such budgets become applicable for regional conformity purposes prior to the end of the twoyear grace period. In this case, the new regional emissions analysis must use MOVES2010 if the conformity determination is based on a MOVES2010-based budget.

If a conformity analysis starts prior to the ending of the grace period, then an MPO can use Mobile 6.2.-(this is my interpretation)
Policy Guidance:
Regional emissions analyses that are started during the grace period can use either MOBILE6.2 or MOVES2010. When the grace period ends, MOVES2010 will become the only approved motor vehicle emissions model for transportation conformity purposes in states outside California. In general, this means that all new conformity analyses started after the end of the grace period must be based on MOVES2010, even if the SIP is based on MOBILE6.2.

Please let me know if you interpret these subjects in a different manner.
I couldn't find everyone from R5. Please pass this information along to the appropriate people.

Thanks,

Cody

Steven Brown

U.S. EPA Region 7
AWMD / APDB
901 N. 5th Street
Kansas City, KS 66101
913-551-7718